



FISH AND WILDLIFE MANAGEMENT REPORT

PROVINCE OF ONTARIO
DEPARTMENT OF LANDS AND FORESTS
Fish and Wildlife Branch

(These Reports Are For Intra-Departmental Information and Not For Publication)

Hon. J. W. Spooner
Minister

F. A. MacDougall
Deputy Minister

T A B L E O F C O N T E N T S

No. 50

February, 1960

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RED FOX MOVEMENTS IN LAKE HURON DISTRICT, 1957-1959

by
R. E. Mason

Contributing Personnel - H. W. Clark
R. A. Guenther
C. A. Wolfe

Introduction:

In 1957 the County of Oxford initiated a bounty system for foxes in which \$50.00 was paid for ear-tagged foxes. This system was initiated to lower the overall cost of bounty payments while still offering incentive to hunters to destroy foxes. (For comments on the success of this system, see Fox Bounty in Oxford County, H. W. Clark, Conservation Officers' Projects, Vol. IV, 1957-1958).

During the rabies epizootic in the early fall of 1958 a similar program was undertaken by Bruce and Wentworth Counties.

In all three Counties foxes were ear-tagged and released by Conservation Officers who recorded the date and location of release. Bounty claimants were required to complete an application form in order to receive payment. The application form solicited the date and location of the capture, and a copy of this was filed at District Office.

Of a total of 60 ear-tagged foxes, records of 22 recaptures were obtained. This is a minimum return of 36.7%.

Procedure:

In Oxford County fox pups were dug from dens in May. After two to three weeks in captivity, they were transported to previously selected sites where they were tagged and released. Of the 15 foxes released, nine were reported shot.

In Wentworth County foxes were obtained, as in Oxford, during June and July. They were kept in captivity at a local zoo until about the middle of September when they were tagged and released on previously selected sites. Of 21 foxes released, five were reported shot.

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1957

In Bruce County a trapper was employed by the County to obtain foxes during October. Foxes were trapped, tagged, transported to the release sites and released all in the same day. Of 25 foxes released, eight recaptures were reported.

Observations:

The distances travelled, directions and number of days between release and recapture are presented in Table I. The data presented are for 18 foxes:

TABLE I - Direction, Distance and Duration

<u>Number</u>	<u>Direction</u>	<u>Miles</u>	<u>Days</u>
1	238°	17.5	167
2	-	0.0	156
3	300°	6.0	78*
4	127°	5.0	133*
5	-	0.0	124*
6	26°	4.5	179
7	347°	32.0	158
8	11°	2.5	256
9	314°	43.5	240
10	330°	2.0	179
11	247°	5.5	184
12	138°	5.5	101
13	202°	28.5	65
14	183°	20.5	195
15	123°	1.5	16
16	68°	22.5	35
17	-	0.0	22
18	-	0.0	68
		Mean 10.9	130.8

* Approximations only - within 14 days.

Discussion:

Since foxes were not sexed, differential movements between males and females could not be measured. Since all the foxes were displaced, the movements would have to be considered dispersal movements rather than movements within a home territory.

No differences were observed in dispersal distances between foxes held in captivity, and foxes which were released the same day as they were captured. The mean distance travelled in the former case was 10.8 miles, and the latter case 11.2 miles, both figures being close to the general mean of 10.9 miles. The record distance travelled was 43.5 miles in which case the fox was at large for 240 days. Four individuals were shot on the release site even though an average of 93 days elapsed between their release and recapture. (Range 22 - 156 days).

In order to obtain from the Bureau of the Census to the release of the information requested, the following information is being furnished:

Between 1960 and 1969, the Bureau of the Census has presented the following information:

TABLE 1 - Estimated Population

Year	Estimated Population
1960	150,000
1961	155,000
1962	160,000
1963	165,000
1964	170,000
1965	175,000
1966	180,000
1967	185,000
1968	190,000
1969	195,000

Approximate population figures for the years 1960 through 1969 are shown in the table above.

Since the population figures are not available for the years 1970 through 1979, the population figures for the years 1960 through 1969 are being used as a basis for estimating the population for the years 1970 through 1979.

The population figures for the years 1960 through 1969 are based on the 1960 Census of the United States. The population figures for the years 1970 through 1979 are based on the 1970 Census of the United States. The population figures for the years 1980 through 1989 are based on the 1980 Census of the United States. The population figures for the years 1990 through 1999 are based on the 1990 Census of the United States. The population figures for the years 2000 through 2009 are based on the 2000 Census of the United States. The population figures for the years 2010 through 2019 are based on the 2010 Census of the United States. The population figures for the years 2020 through 2029 are based on the 2020 Census of the United States. The population figures for the years 2030 through 2039 are based on the 2030 Census of the United States. The population figures for the years 2040 through 2049 are based on the 2040 Census of the United States. The population figures for the years 2050 through 2059 are based on the 2050 Census of the United States. The population figures for the years 2060 through 2069 are based on the 2060 Census of the United States. The population figures for the years 2070 through 2079 are based on the 2070 Census of the United States. The population figures for the years 2080 through 2089 are based on the 2080 Census of the United States. The population figures for the years 2090 through 2099 are based on the 2090 Census of the United States.

No differences were observed in the direction of travel of the foxes, that is, no trend to move in the same general direction, as shown in Table II.

TABLE II - Direction of Travel

<u>Direction</u>	<u>No. Foxes</u>	<u>Direction</u>	<u>No. Foxes</u>
0 - 90°	3	45 - 135°	3
90 - 180°	3	135 - 225°	3
180 - 270°	4	225 - 315°	4
270 - 360°	4	315 - 45°	4

Dispersion of foxes in this District would, therefore, seem to be random, as modified by habitat requirements.

No indication of homing was found in the released animals.

The mean length of time between release and recapture was 131 days. This would indicate a short life expectancy in the wild. Assuming the foxes were born during the first week in April, these figures would indicate an average life expectancy of about 250 to 260 days.

The argument might be made that the rabies epizootic would affect these figures of life expectancy. However, using the Oxford County information only, and assuming the same time of birth, the life expectancy of those foxes was only 245 days. The program in Oxford County was initiated one year before the epizootic.

Summary:

- (1) Dispersal movements of foxes were random although probably modified by habitat requirements.
 - (2) The mean linear distance travelled during dispersal movements was about 11 miles.
 - (3) Displaced foxes showed no evidence of homing.
 - (4) Life expectancy of foxes under natural conditions is less than one year.
-

As shown

TABLE 1

Diagnosis
0 - 100
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300 - 400

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Summary:

- (1) Diagnosis
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GOGAMA DISTRICT AERIAL BEAVER CENSUS, 1959

by
E. H. Stone

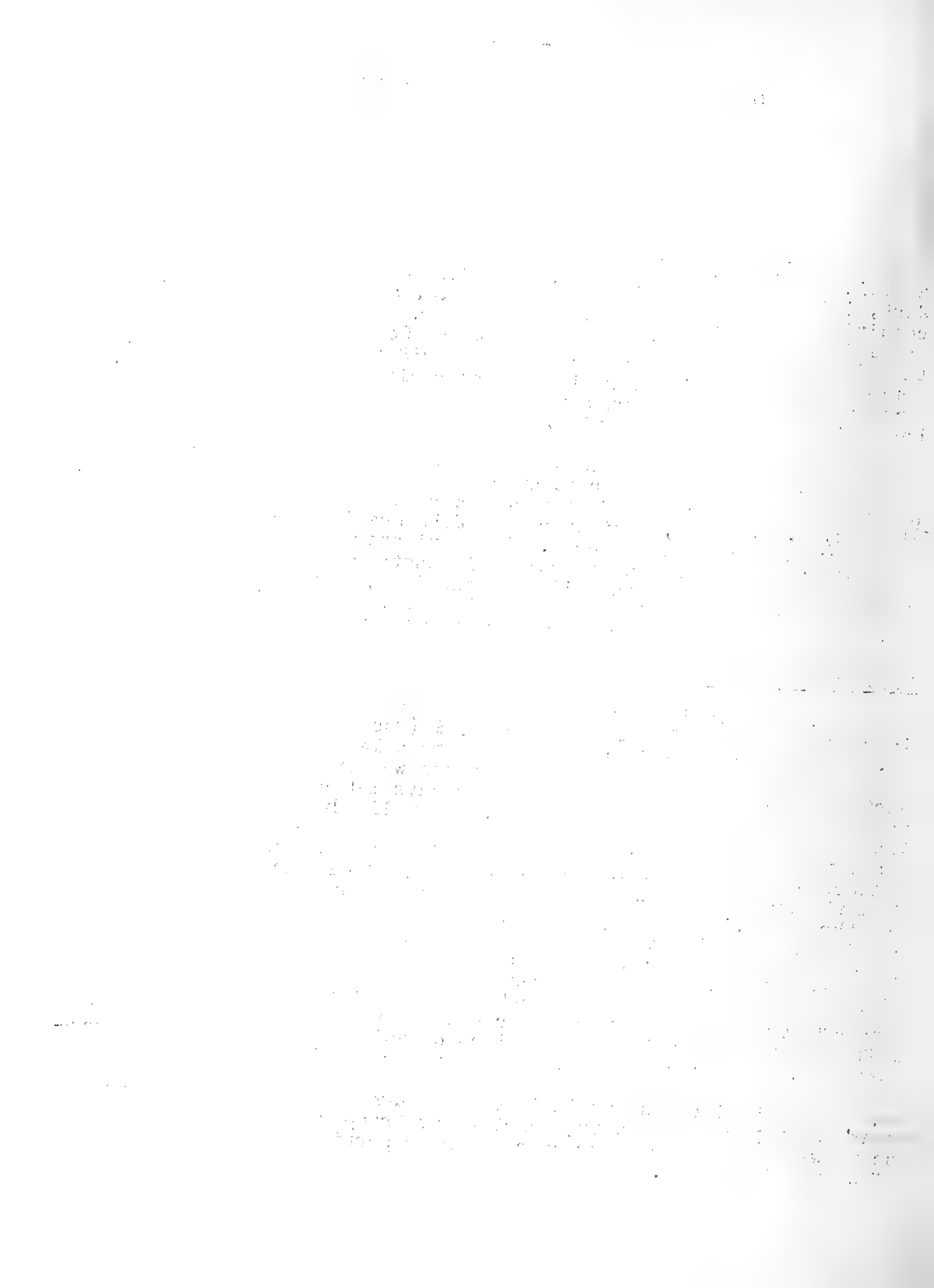
For the fourth consecutive year the beaver census course, as laid out in 1956, was flown. The flight took place in October 21st, 1959 between the hours of 08:30 a.m. and 12:30 p.m.. Weather conditions were ideal with clear skies and visibility unlimited. An altitude of 850 feet above the lake at Gogama was maintained on the flight, as was the case during the 1958 flight. The circular course was once again flown in a counter clockwise direction. Forest typing as established during the 1958 survey was utilized on the same basis for the 1959 compilation.

The crew was changed once again, which is unavoidable in this District due to the frequent changes in staff. George Campbell, pilot and Bruce Turner left observer participated in the 1958 survey whereas, E. H. Stone, navigator, and John McKnight right observer were new additions to the crew. The navigator however, had previously participated in this type of survey in another District. Observations were plotted on a map, two miles to the inch, for the first time, as suggested by the Division of Research. This should give a better picture of year to year comparisons over this selected route.

Population Change

Observations made during the 1959 survey showed an overall increase of 41 in all classes, or 30.6% (Table II). An increase of 20.8% in lodges with food piles could be a leading indication that a general increase in beaver populations was evident over the transects flown. The flight was made two days later than in 1958 and it was quite noticeable that freeze up was well advanced as compared to that experienced in previous years. Many of the small ponds were completely frozen. This could have stimulated an early food pile collection by the beaver. The "active pond" category almost doubled from the previous year and swung completely out of line with that of the three previous years, which were relatively stable. With ice conditions existing on many of the ponds, there is the possibility weird reflections through the ice could have been misleading and given the observers false impressions of beaver activity. In this instance the increase in this category cannot be blamed on the "green" observer. He had a lower count than that of the experienced left observer who tallied a total comparable to the combined observations under the "active pond" category for the 1958 census.

The increase as indicated through observations during this year's survey could be a true picture as trappers appearing on the scene with their first fur catches are reporting varying degrees of beaver increases.



Forest types as adjusted during the 1958 flight were checked and considered to be as accurate as feasibly possible. Slight variations were noticeable where breaks occurred in the typing but this was not considered worthy of a change.

The principal type (mixed wood) consisting of #1 and 2 (Table III) showed increases in total observations from 36.2 to 55.1 in #1 and from 57.1 to 71.4 per hundred lineal miles in #2. Forest type #3 and #8 dropped slightly in total observations with the balance of the areas showing slight increases.

The number of observations in all but the first two types are of such a small number, and representative of only a small portion of the total area surveyed, that changes are insignificant.

Observer Efficiency

As stated in previous reports it is quite obvious that observers for this survey should be preserved from year to year. Familiarization flights prior to the actual survey flight would undoubtedly aid those who are completely "green".

However, this would not give the desired efficiency, gained only by years of experience, that is necessary to illustrate a better picture of year-to-year trends.

This part of the survey still creates many discrepancies and can only be remedied by utilizing observers who are experienced and keenly interested in this type of work.

TABLE I - Observations Recorded By Observers

	<u>Active Lodge With Food Pile</u>	<u>Active Lodge Alone</u>	<u>Food Pile Alone</u>	<u>Active Pond</u>	<u>Water</u>
Left Observer	5	4	0	8	-
Right Observer	11	6	4	15	-
Left Observer	51	2	3	9	220
Right Observer	24	4	0	11	231
Left Observer	16	8	4	9	276
Right Observer	22	5	10	19	319
Left Observer	20	7	4	28	240
Right Observer	28	14	8	25	230

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and processing, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that the data management processes remain effective and up-to-date.

TABLE II - Total Observations

<u> </u>	<u>Active Lodge With Food Pile</u>	<u>Active Lodge Alone</u>	<u>Food Pile Alone</u>	<u>Active Pond</u>	<u>Total All Classes</u>
1956	16	10	4	23	53
1957	75	6	3	22	106
1958	38	13	14	28	93
1959	48	21	12	53	134

Section 1: Introduction

Section 2: Background

Section 3: Discussion

Section 4: Conclusion

TABLE III -

Forest Type	Active Lodge With Food Pile	Active Lodge Alone	Food Pile Alone	Active Pond	Water	Total Miles	Observations Per 100 Miles
#1-M Po, Pj, Bw, Sw, B	28	11	6	25	123 120	127	55.1
#2-M Pj, Sb, Po, B	4	2	-	4	25 19	14	71.4
#3-H Po, Bw.	2	2	-	4	7 9	11	72.7
#4-C Pj, Sb, Sw	3	1	2	8	28 25	28	50.0
#5-C Pj	3	2	2	4	18 11	16	68.8
#6-C Sb	-	-	1	-	5 3	6	16.7
#7-BR 1941	7	3	1	7	24 29	29	62.1
#8-BN	1	-	-	1	10 14	6	33.4
TOTAL	48	21	12	53	240 230	237	

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DEER BROWSE SURVEY AND PELLET GROUP COUNT
RAT LAKE CONCENTRATION AREA

by
W. L. MacKinnon

Introduction

A winter deer concentration area was found to exist northwest of Rat Lake near the University of Toronto Forest.

During the winter of 1958-59 this area was surveyed by air craft and the boundaries of the deer concentration mapped. The purpose of this preliminary survey was to provide a study area close to the Forest Ranger School, where deer browse surveys and pellet group counts could be made by students under normal field conditions.

From the aerial survey deer were found to be using an area of approximately $1/3$ square mile in size.

This area was established on base maps and typed as to forest composition. On June 4, 1959, a deer browse survey and pellet group count was conducted by a group of fifteen students attending a Special Fish and Wildlife Course at the Forest Ranger School.

Method

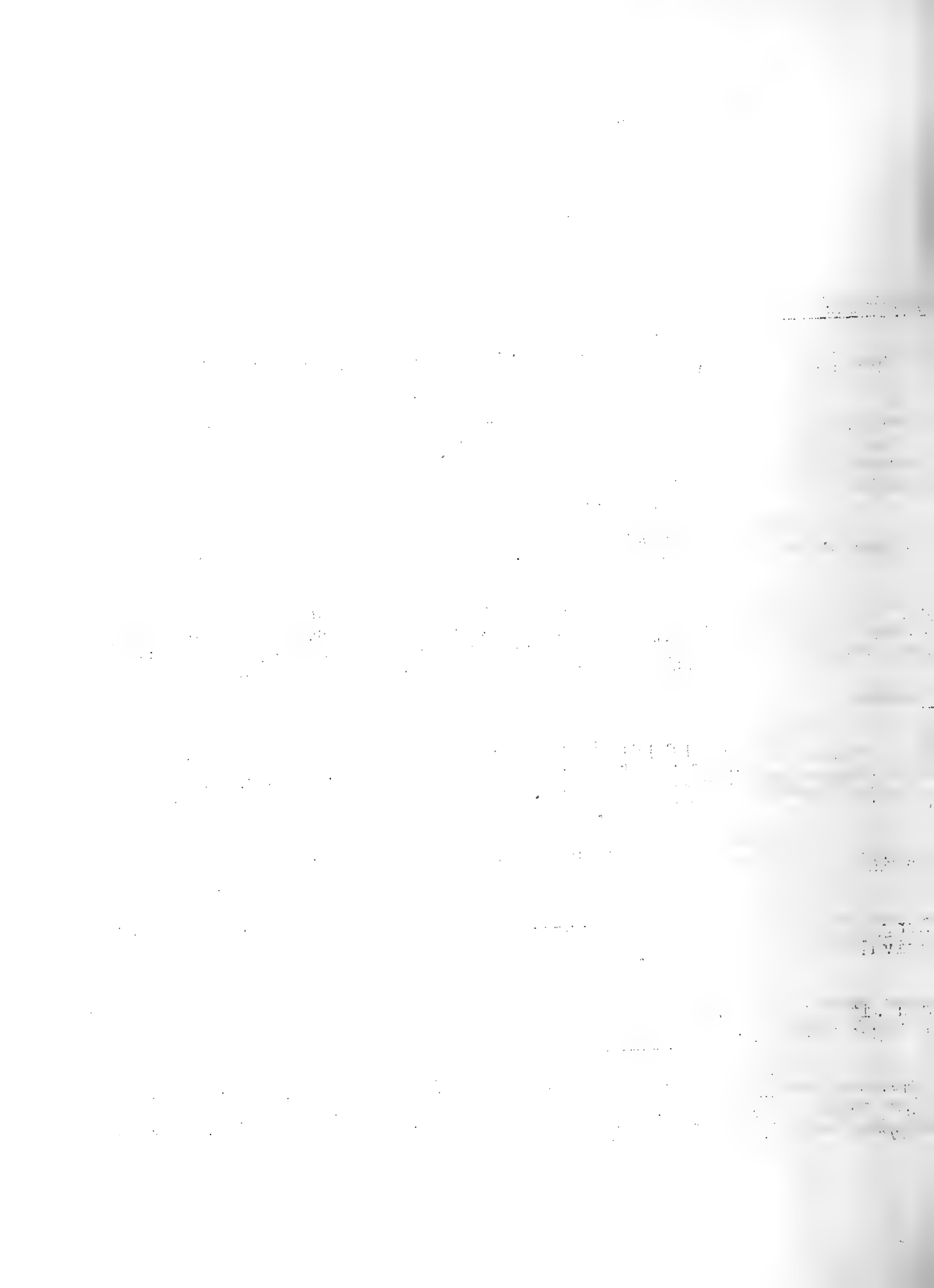
Maps were prepared with transects running lengthwise of the concentration area, starting two chns. from the shore at Rat Lake, five lines were run at seven chn. intervals and a party of three men did the survey on each line.

One member of each party acted as compass and chainman leaving the other two men to count twigs and pellet groups.

A plot 2 feet by 66 feet was taken at five chn. intervals along each of the respective lines one to five, these plots being equivalent to $1/330$ acre.

For the purpose of the pellet group counts, the same plot was used with the exception that 3.3 feet each side of the chain was used giving a plot size of 6.6' x 66' or $1/100$ of an acre.

To facilitate the measurements in the field, sticks or saplings were cut, one, two feet with a one foot division, one, 3.3 feet with a $1\ 1/2$ ft. division mark which was used to measure height of available browse and width of pellet group plot.



All stems (living) within the range of 1 1/2 feet to 6 1/2 feet high lying within the actual boundary of the browse survey plot (2' x 66') were tallied as one stem. The total number of living stems with available browse found on each plot were tallied and recorded in the living stem column on tally sheet.

Stems mutilated by old browsing were tallied in the mutilated column but were also recorded as a living stem.

Stems killed by former browsing were tallied in the killed column, no winter killed or other type of damaged stems were recorded.

Information was also collected on the topographic and geographic features of the area, type of soil, forest composition, and slope gradient after browse and pellet groups were counted.

This information was recorded on Deer Browse Tally Form (RES 23).

Deer pellet groups found on plots were tallied as to winter or summer droppings, also on reverse side of sheet (RES 23).

Results

Data collected in the field were compiled in class the following day. The Deer Browse Survey was done first, and will be dealt with in this order.

A total of 57 plots were completed by the five crews and an area summary was then completed using form (RES 23).

From this form the following information was compiled by species for all species occurring on the concentration area.

Frequency Index

This was found by dividing the total number of plots sampled into the number of times a species occurred.

e.g. Balsam: $\frac{9}{57}$ (number of Plots with balsam) = .16
(total number of plots)

Living Stems Per Acre

This was found by taking the sum of the living stem x 330 (size of plot) over number of plots in the sample.

e.g. Balsam: $\frac{22 \times 330}{57} = 126$

1. The first part of the document discusses the importance of maintaining accurate records. It emphasizes that proper record-keeping is essential for ensuring the integrity and reliability of the data collected. This section also outlines the various methods used to collect and analyze the data, highlighting the challenges faced during the process.

2. The second part of the document provides a detailed overview of the experimental procedures. It describes the setup of the laboratory, the equipment used, and the specific steps followed during the experiments. This section is crucial for understanding the methodology and the potential sources of error in the study.

3. The third part of the document presents the results of the experiments. It includes a series of tables and graphs that illustrate the data collected. The analysis shows that there is a significant correlation between the variables studied, which supports the hypothesis of the study. The results are discussed in the context of existing literature and theoretical models.

4. The fourth part of the document discusses the implications of the findings. It explores how the results can be applied in practical settings and what they tell us about the underlying phenomena. The author also addresses the limitations of the study and suggests directions for future research to further investigate the topic.

5. The fifth part of the document provides a conclusion and a summary of the key points. It reiterates the main findings and the significance of the study. The author expresses gratitude to the funding agencies and the research assistants who contributed to the work. Finally, a list of references is provided to acknowledge the work of other researchers in the field.

6. The sixth part of the document contains the appendices, which include additional data, detailed calculations, and supplementary information. These appendices are provided to support the main text and to allow for a more thorough examination of the data and methods used in the study.

Relative Availability

This was found by taking the total sum of living stems of one species over sum of total stems of all species, times 100 and is expressed as a percentage.

e.g. Balsam: $\frac{127}{.4370} \begin{matrix} \text{(Balsam stems)} \\ \text{(Total of all species)} \end{matrix} \times 100 = 2.9\%$

Browse Units Per Acre

This was found by taking the Browse units in sample over number of plots sampled x 1/330.

e.g. Balsam: Browse units 189 x $\frac{(330)}{57} 5.8 = 1100$ (approx.)

Relative Utilization Percentage

This was found by taking the Browse units for one species over Browse units for all species x 100.

e.g. Balsam: $\frac{1100}{54400} \times 100 = 2\%$

Twigs Browsed Percentage

This was found by taking the Browse units per acre over living stem per acre.

e.g. $\frac{1100}{127} = 8.7\%$

Percentage of Mutilated Stems to Living Stems

This was found by taking the number of Mutilated Stems over total number of stems x 100 and is expressed as a percentage.

e.g. Balsam $\frac{7}{22}$ (Mutilated) x 100 = 31.8%

Percentage of Killed Stems

This was found by taking the number of stems killed over the number of living stems and killed stems, times 100, and is expressed as a percentage.

e.g. Balsam $\frac{1}{(22 \& 1) \text{ L \& K}} \text{ killed} \times 100 = 4.4\%$

Summary

Frequency index gives us some idea of what species occur in concentration area. The percentage of twigs browsed gives indication of what species are preferred. A table of preferred foods can be made from this information.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy auditing of the accounts.

Furthermore, it is noted that regular reconciliation of the books is essential to identify any discrepancies early on. This process involves comparing the internal records with bank statements and other external sources to ensure they match.

In addition, the document highlights the need for clear communication between all parties involved in the financial process. This includes providing timely updates to stakeholders and addressing any queries or concerns promptly.

It is also stressed that the financial data should be presented in a clear and concise manner, using appropriate charts and graphs to illustrate trends and patterns. This helps in making informed decisions based on the available information.

The final section of the document provides a summary of the key points discussed. It reiterates the importance of accuracy, transparency, and communication in financial management. It also offers some practical tips for implementing these principles effectively.

Overall, the document serves as a comprehensive guide for anyone looking to improve their financial record-keeping and reporting practices. It provides a clear framework for ensuring that all financial activities are properly documented and accounted for.

Availability does not indicate the utilization as it is not in proportion.

e.g. Sugar maple 13,500 units browsed 9.4%
Hemlock 5,900 units browsed 20.8%

It is dependent upon the preferred species. Overall utilization gives an indication as to the extent the available browse was utilized by deer using the area. In the area sampled it was found that browse was utilized at 12.4%.

$\frac{54,390}{4,370}$ total B.U. per acre = 12.4%
living stems per acre

An area may sustain up to 50% utilization without affecting food supply, this may be detrimental to good forest management, a 20% utilization appears to be a good figure for both deer and forest management.

Pellet Group Count

The total number of pellet groups found were totalled for the 57 plots by season of deposition and are given below.

<u>Winter</u>	<u>Summer</u>
245	5

To calculate in terms of deer per square mile, the following formula was used:

$\frac{\text{Pellet Groups} \times 100}{\text{Number of plots in sample}}$ (1/100 acre size of sample)

$\frac{245 \times 100}{57}$ - 430 pellets per acre.

Pellet groups per square mile:

$430 \times 640 = 275,200$ pellets per square mile.

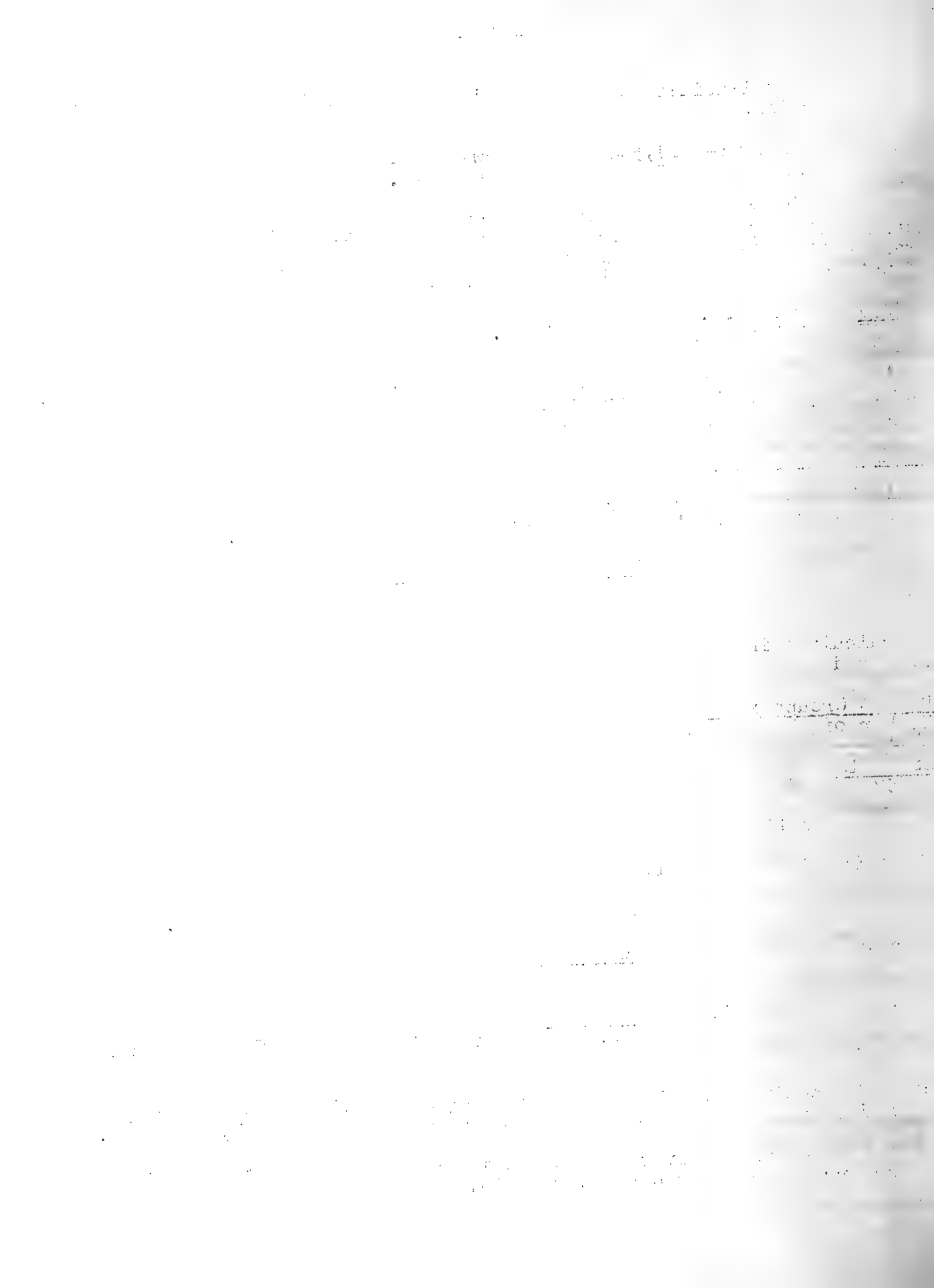
12.7 was factor used as deposition occurrence per day per deer.

Deer days will then be: $\frac{430 \times 640}{12.7} =$ deer days per square mile

Deer per square mile: $\frac{430 \times 640}{12.7 \times 195 \text{ days of deposition}} = 110$ per sq. mile.

Days of deposition which may be arbitrary, depending on when survey was made, was in this case from October 18th to April 30th, 195 days.

The above gives a figure which may only be expressed as the occurrence of deer per square mile.



To arrive at the number of deer using area the following formula was used:

$$\frac{430 \times 215 \text{ acres (size of area sampled)}}{12.7 \times 195} = 37 \text{ deer on area.}$$

Acknowledgment

I wish to thank Mr. Bruce Stephenson and Mr. Wm. Morris for their instruction and help in carrying out this survey, also other members of our party, Messrs. E. Deedo and C. Thompson, for their assistance.

Species	Frequency Index	Living Stems Per Acre	Relative Availability %	Browse Units Per Acre	Relative Utilization %	Twigs Browsed	Mutil. Stems % Living	Killed Stems %
Balsam	.16	127	2.9	1100	2	8.7	31.8	4.4
Hemlock	.28	284	6.5	5900	10.9	20.8	18.4	-
White Pine	.02	6	.1	-	-	-	100.	-
Bal. Poplar	.04	12	.3	-	-	-	-	-
Hazel	.23	156	3.6	920	1.7	5.9	11.1	3.6
Yellow Birch	.09	29	.7	810	1.5	27.9	40.	-
White Birch	.02	6	.1	-	-	-	100.	-
Alder	.02	6	.1	-	-	-	-	-
Beech	.47	533	12.3	5810	10.7	10.8	-	-
White Oak	.02	6	.1	290	.5	48.4	-	-
Red Oak	.09	35	.8	90	.2	2.5	-	-
Elms	.02	6	.1	-	-	-	-	-
Ribes	.02	6	.1	-	-	-	-	-
Black Cherry	.07	46	1.1	30	.1	.7	12.5	-
Choke Cherry	.02	6	.1	170	.3	28.3	-	-
St. Maple	.69	562	12.9	10580	19.5	18.8	21.7	11.8
Mtn. Maple	.04	168	3.8	2900	5.3	17.2	6.9	-
Sugar Maple	.70	1430	32.7	13500	24.8	9.4	5.7	1.2
Red Maple	.26	220	5.0	2750	5.1	12.5	13.2	2.6
Dogwood	.02	6	0.1	-	-	-	-	-
Black Ash	.11	99	2.3	30	.1	.3	-	-
Honey Suckle	.19	133	3.0	360	.7	2.7	4.3	-
Hobble Bush	.39	348	8.0	7030	12.9	20.2	23.3	7.7
White Spruce	.02	6	.1	-	-	-	-	-
Hornebeam	.19	122	2.8	2120	3.9	17.4	4.8	-
White Ash	.04	12	.3	-	-	-	-	-
	100 %	4370	100 %	54390				

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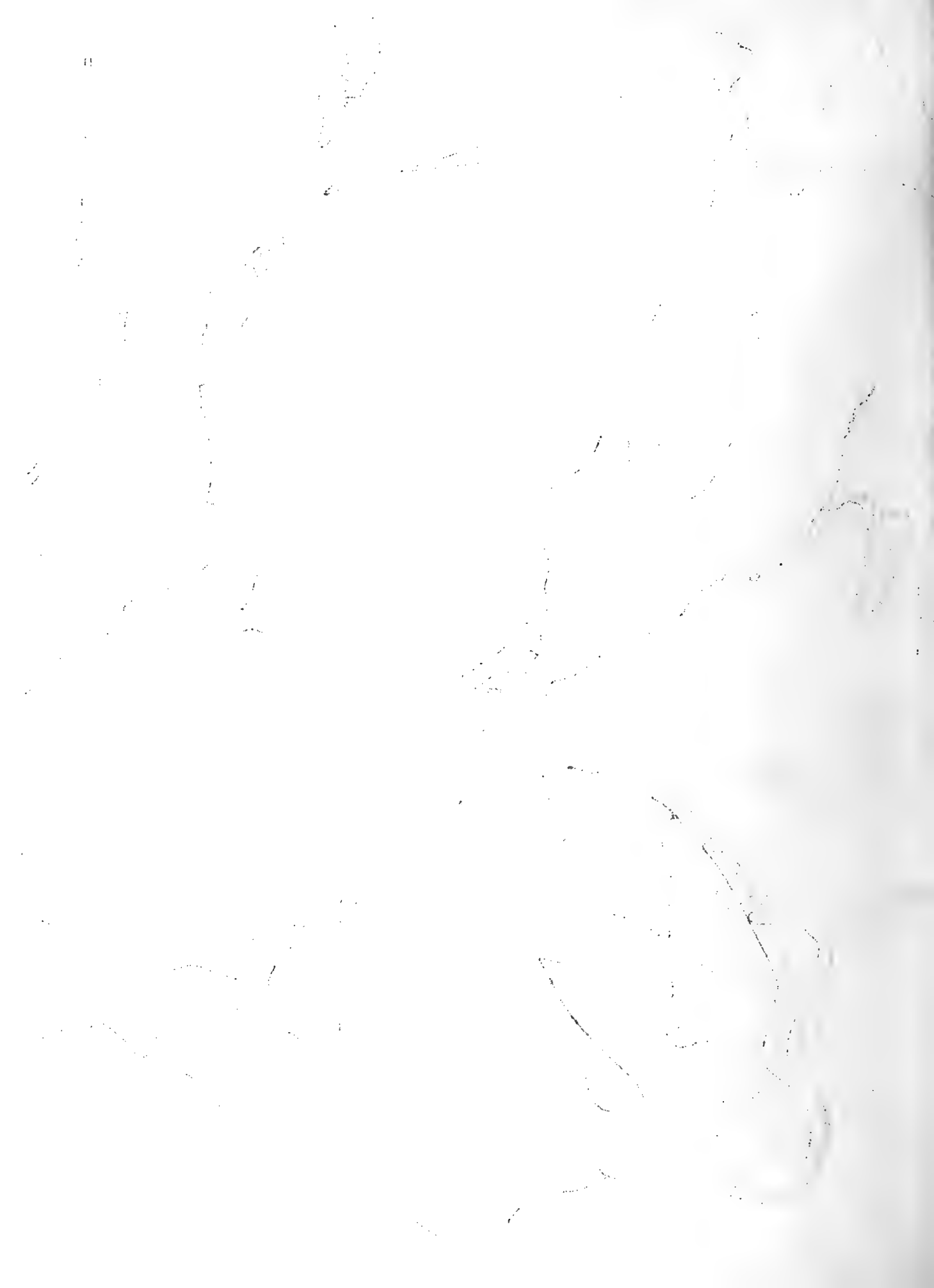
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1 inch



REPORT OF DEER SURVEY, 1959
BLAIR AND MOWAT TOWNSHIPS, PARRY SOUND DISTRICT

by
W. E. Ellerington

Surveys were conducted near Squaw Lake, Blair Township and Mud Creek area of Mowat Township to determine the winter die off of deer in that area and to gather some information on the browse conditions in general as well as a visual observation of the remaining deer herd, if possible.

Necessary equipment was moved into this area on Monday, May 4th and set up in a camp between the two areas to be surveyed by the two officers and four men that were to do the work.

The Squaw Lake area consisted of eight deer wintering yards and a like amount of fringe area and amounted to some 5,600 acres. On the cruise lines we found 10 dead deer. Browse conditions indicated heavy past browsing as many mutilated stems were noted. Much of the past winter's browsing was on hazel, some browsing was also noted on juniper. Considerable evidence of live deer was noted and although only three deer were seen tracks and other indications were that there was still an abundance of deer.

Mud Creek area consisted of six deer wintering areas and a considerable amount of fringe area amounting to some 4,000 acres. On the cruise lines one dead deer was found, also, a concerted search of six chains in width on both sides of Mud Creek for a distance of 38 chains produced only one dead deer. Heavy browsing was noted in some areas but heavy past browsing was not noted as on the Squaw Lake area. Browsing was noted on hazel and also there was considerable maple in this area which had been heavily browsed. Evidence of live deer in this area was heavy and one deer was seen.

Difficulties experienced in conducting this survey were mainly caused by flooded land which did not show on the maps while planning this survey. This caused us to deviate from the proposed cruise lines and left the distances of the lines to be estimated to some extent. This was overcome in some instances where we had changed the boundary line to a watershed boundary and in doing so we were also able to map any compassing error that we might have made.

For future work in an area of this type of topography I would recommend contour maps be used for the additional landmarks that they would supply. They would also be of assistance in laying out the cruise lines as I observed that in some areas we were not crossing the ridges and consequently were not properly crossing the timber types.

100 100

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Also aerial photographs would be of considerable assistance as it was found that the topography did not conform too accurately to the maps we were using.

In conclusion, I would suggest that having observed the browse conditions at present in this area and having observed the numbers of deer alive and present that no severe damage had been done to the deer herds. In fact, I would suggest that considering the winter food situation and cover that the area investigated was overpopulated in so far as good game management is concerned and that to sustain a healthy herd of deer in this area better browse conditions should be considered as the main problem rather than severe winters.

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DUCK BANDING - GOGAMA DISTRICT - 1959

by
J. E. Culliton

Duck banding was once again carried out in this District from the Halliday Lake area. This year marks the fourth consecutive season that this project was embarked upon by members of the local Fish and Wildlife staff.

Due to an unfortunate accident at our District Office, all our field records re "Duck Banding - 1959" were lost to fire. It will therefore be impossible to give an accurate account of the project as to sex and age ratios. It is our good fortune however, to have had comprehensive personal records kept in the diaries of the Officers engaged in the project. From these diaries we have gathered information to compile this report, giving total ducks banded and an account of daily trap intake.

Officers engaged in this project this season were: C. O. George Vozech, C. O. Arthur Zimmerman, C. O. Ellis Culliton and Mr. George Naveau. Mr. Naveau was hired on a temporary basis to assist, and arrived at Halliday Lake September 4, remaining until September 17.

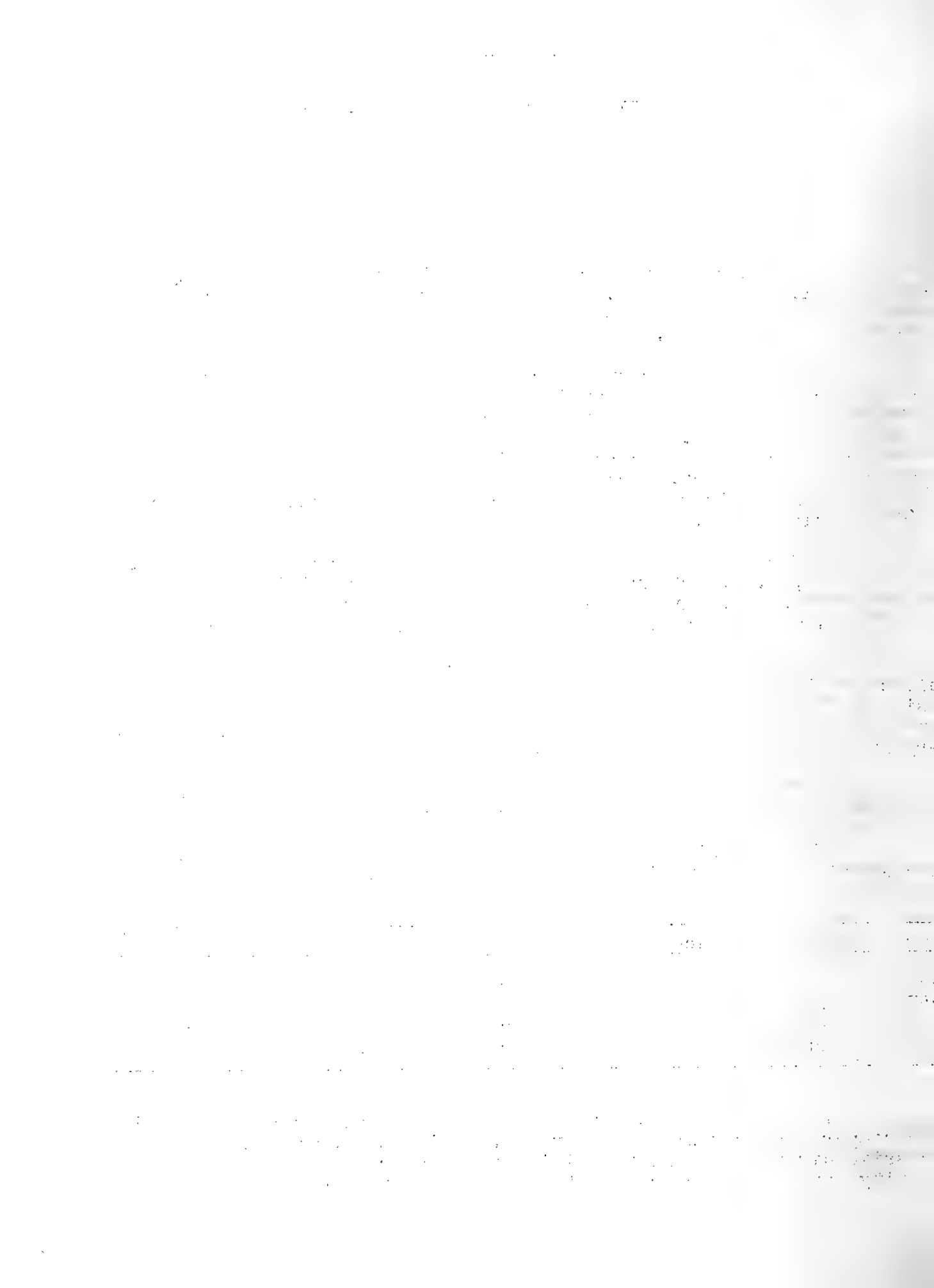
On August 5 the grass at the trap sites was cut, the cages pulled out into view, and the sites baited for the first time. Another visit to Halliday Lake was made on August 12, at which time the traps were placed very close to the sites and all positions were re-baited. Very little bait acceptance was noted on the August 12 visit.

On August 18 the crew began occupancy of the Halliday Lake cabin and the erection of the traps commenced.

The following table gives a comparison of duration and success of the project since its origin in 1956:

<u>Year</u>	<u>Banding Commenced</u>	<u>Banding Ceased</u>	<u>Total Days</u>	<u>Total Banded</u>
1956	August 23	September 15	24	462
1957	August 16	September 6	22	206
1958	August 19	September 11	24	285
1959	August 18	September 13	27	198

It will be noted that the figure of total ducks banded in 1959 compares poorly with other years. This is attributed in part to excessive disturbances in the vicinity of the cages due to mining activity, and predator action at one of our hitherto best sites.



In general fewer ducks were observed this season than in the past. It is believed that the quantity of ducks in this area is far below what it has been in past years.

Only three casualties occurred during the entire period of trapping. One of these was an immature black duck which was destroyed by a lynx in Baker cage on August 24. (The lynx was subsequently captured alive and forwarded to Gogama and Toronto). Another casualty was an immature black duck carrying the band number 637-20311. The third was an unbanded, immature black duck.

Once again the selectivity of the corn baited traps became apparent. Out of the 198 captured and banded this season it is estimated that only three were adult blacks, and one an adult mallard. Sex ratio was estimated to 1:1 for the blacks, and the single mallard captured was female.

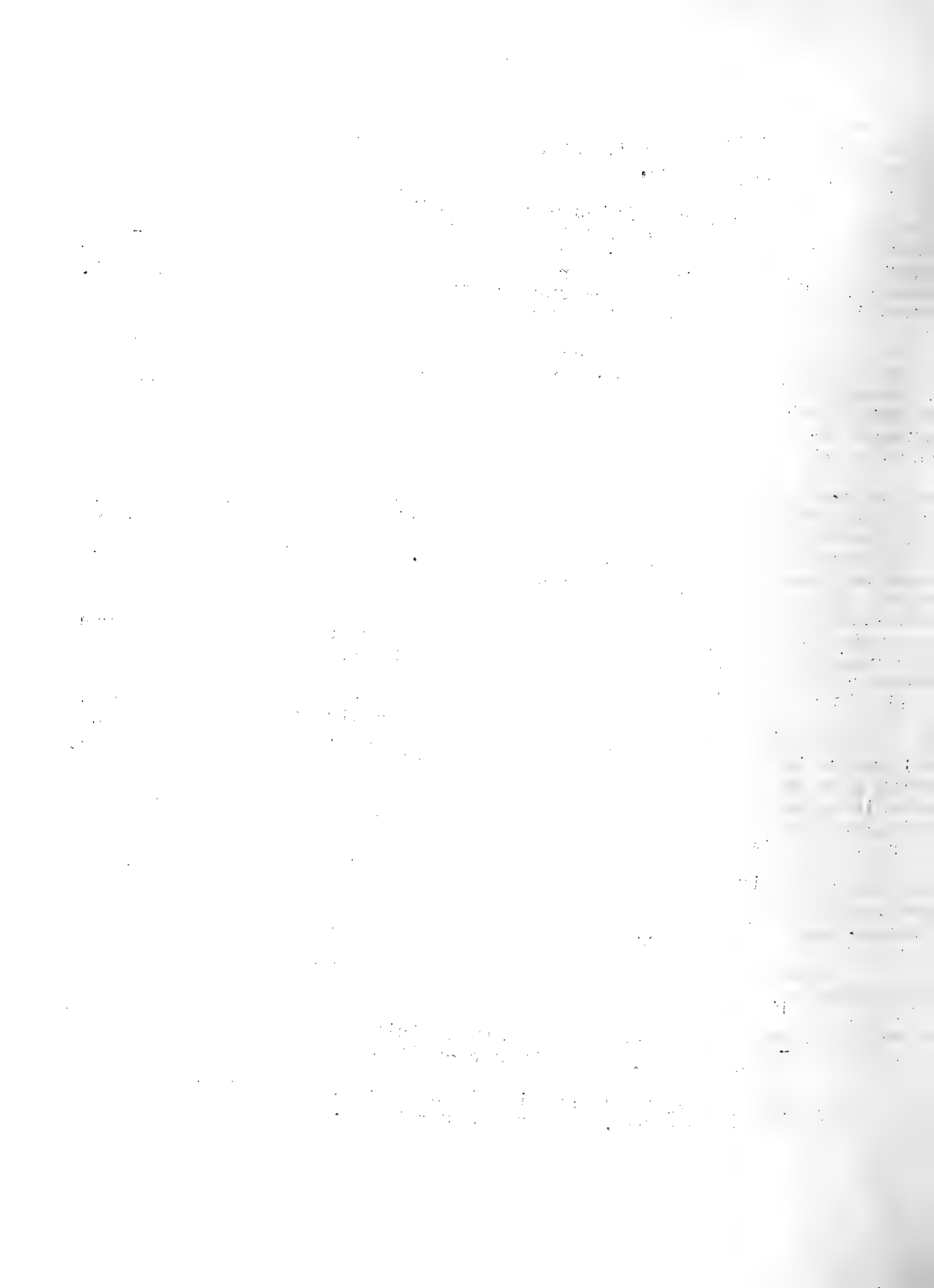
As will be noted in the daily summary, (immediately following this report) Dog and Easy sites in the Grassy River fared poorly. Dog site's total intake was a mere seven ducks and Easy produced nil. This lack of production could be attributed to the above average crop of wild rice that was apparent this season. As the rice affords an excellent source of diet for ducks, they avoid the suspicious appearing traps. It is suggested that if the project is to be carried out in the future, a study of the rice crop should be made beforehand to ascertain the quantity of the rice. If this study determines the crop to be abundant, the river sites should be discontinued and greater emphasis put on the lake sites.

This year the traps were completely dismantled by September 13, a scant two days prior to the hunting season. The remaining corn bait was trampled into the mud, and all evidence of the sites removed. During periodic checks it was noted that once again the ducks ceased to be interested in the sites immediately the bait was removed, thus making it possible to bait close to the hunting season.

It is interesting to note that only two duck hunters were observed to be hunting in the Halliday Lake area during the opening shoot. A check of these hunters showed that they bagged only three unbanded ducks the first two days of the season.

Following is a daily summary of the work done during the 27 day banding period:

- August 18 - Cabin set up and all sites visited to determine amount of acceptance. All sites re-baited.
- 19 - Dog, Easy and Charlie sites erected and Easy ready for taking birds. All sites re-baited.



- August 20 - Charlie site completed and ready for taking birds. All sites re-baited.
- 21 - Baker trap completed and ready for taking birds. All sites re-baited.
- 22 - Charlie took two ducks. All sites re-baited.
- 23 - Nil activity, all sites re-baited.
- 24 - Charlie took total of 13 ducks. Lynx found in Baker trap with partially devoured duck. Lynx captured alive and shipped via aircraft OCP to Gogama. Able trap partially erected, all sites re-baited.
- 25 - One duck taken at Charlie. All traps ready for taking ducks this date. All sites re-baited.
- 26 - Charlie took six ducks and Able 18. All sites re-baited.
- 27 - Charlie took five ducks, Baker six, Able seven and Harry one. All sites re-baited.
- 28 - Charlie took three, Baker six, Able seven and Harry one. All sites re-baited.
- 29 - Able took 15, Baker 20, Charlie five and Harry one. All sites re-baited.
- 30 - Able took six, Charlie four and Harry one. All sites re-baited.
- 31 - Able took ten, Baker seven, Charlie eight and Harry one. All sites re-baited.
- Sept. 1 - Able took 18, Charlie three. All sites re-baited.
- 2 - Able took 11, Baker two and Charlie 13. All sites re-baited.
- 3.- Able took 15, Baker three and Charlie one. All sites re-baited.
- 4 - Able took 11, and Baker seven. All sites re-baited.
- 5 - Able took three and Charlie seven. All sites re-baited.
- 6 - Able took four, Charlie eight and Dog one. This is the first duck taken at Dog site this season. All sites re-baited.

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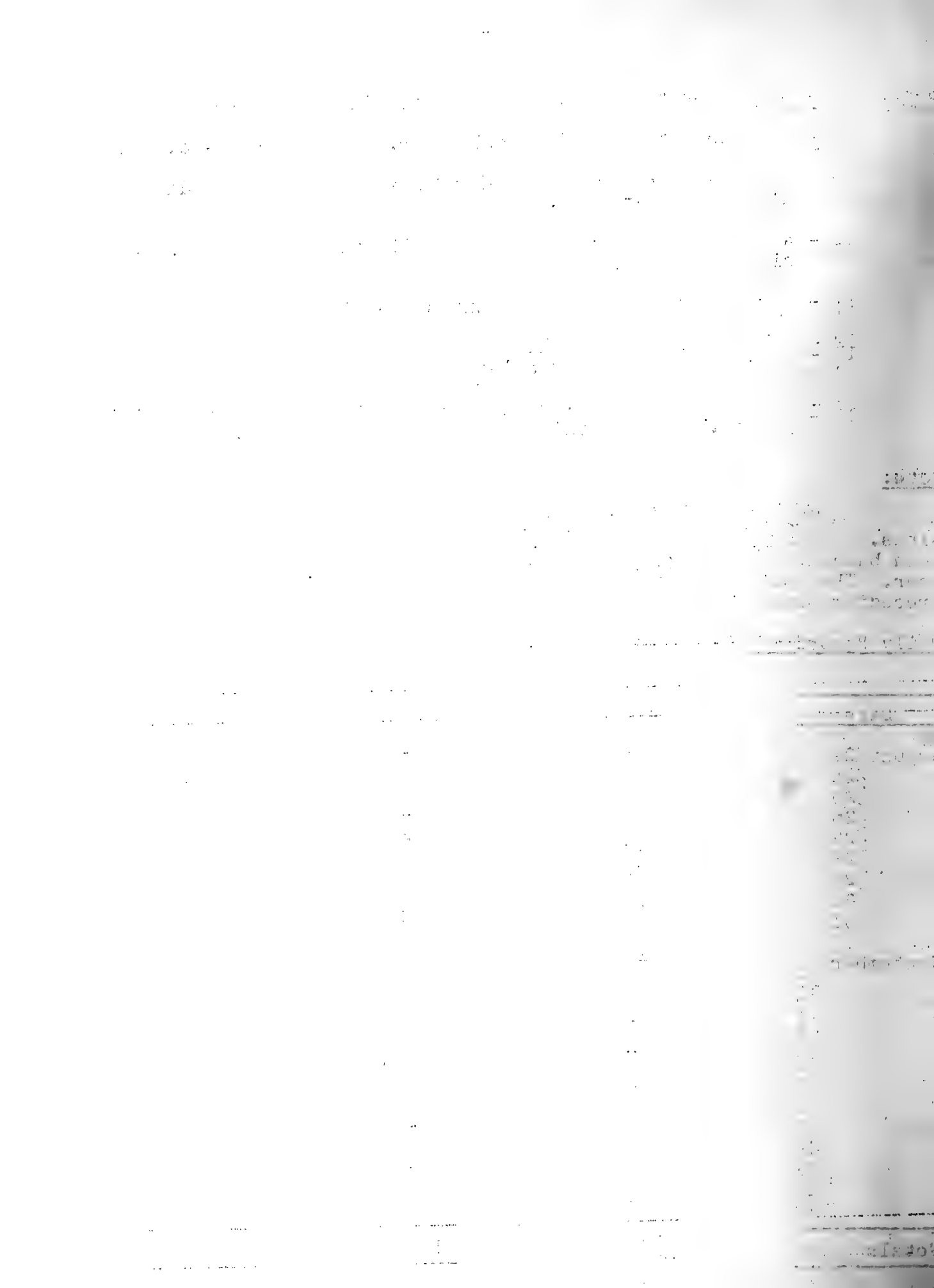
- Sept. 7 - Able took three and Charlie two, all sites re-baited.
 8 - Able took three and Charlie four. All sites re-baited.
 9 - All traps produced a total of six new ducks this date. All sites re-baited.
 10 - Able took one, Baker five, Charlie two and Dog one. All sites rebaited.
 11 - Dog took two ducks. All sites re-baited.
 12 - Baker took two, Charlie one and Dog four. Harry, Dog and Easy traps were dismantled this date.
 13 - Able took five, Baker one and Charlie four. All remaining traps dismantled this date and project ceased.

Note:

This summary shows a large overall intake of ducks at all sites. The majority of the ducks taken after the second week had been banded previously, either this year, or as in a few cases, last year. The following Daily Record of Ducks Trapped condenses the preceding summary.

Daily Record of Ducks Trapped, 1959

<u>Date</u>	<u>New Ducks</u>	<u>Repeats</u>	<u>Total/Day</u>
August 22	2	-	2
24	9	2	11
25	1	-	1
26	24	-	24
27	13	2	15
28	13	4	17
29	32	9	41
30	5	6	11
31	11	15	26
September 1	13	8	21
2	8	18	26
3	9	10	19
4	12	6	18
5	3	7	10
6	7	6	13
7	3	2	5
8	2	5	7
9	6	-	6
10	8	1	9
11	2	-	2
12	6	1	7
13	9	1	10
<u>Totals</u>	<u>198</u>	<u>103</u>	<u>301</u>



Total By Species

1 mallard
197 black duck

Comparison of Daily Record of Ducks Banded 1956 - 1959

August and September Dates

	A u g u s t															
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>
1956	-	-	-	-	-	-	-	8	22	39	40	20	13	20	16	13
1957	10	18	14	14	10	7	23	12	9	8	11	12	11	9	4	4
1958	-	-	-	6	11	13	3	9	12	2	12	15	12	17	15	11
1959	-	-	-	-	-	-	2	0	9	1	24	13	13	32	5	11

	S e p t e m b e r															
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	
1956	16	6	10	24	21	21	30	15	31	28	14	13	17	10	13	
1957	3	4	1	1	4	19	-	-	-	-	-	-	-	-	-	
1958	7	29	23	9	24	11	8	20	9	6	2	-	-	-	-	
1959	13	8	9	12	3	7	3	2	6	8	2	6	9	-	-	

Cost of the 1959 Duck Banding Project, exclusive of Conservation Officer's wages and transportation were as follows:

Grain for Bait	\$ 84.00
Provisions	\$ 143.71
Wages - (G. Naveau)	\$ 117.00
TOTAL COST	<u>\$ 344.71</u>

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SMALL GAME HUNTERS MAIL BAG SURVEY CARRIED OUT IN
LAKE HURON DISTRICT, 1958-59

by
T. M. Nicholl

Selection of Hunters

When licences were distributed to the Township Issuers, every tenth hunter received a "Hunter Survey Kit."

Statistics Based on the Returns From Hunters

Estimated sales of licences to 23 Regulated Townships	6,000
No. of hunters issued "Survey Kits"	616
No. of hunters returns usable	287
No. of hunters returns unusable	64
No. of hunters shot all kinds of game	234
No. of hunters did not shoot pheasant	53
No. of hunters who only shot fox (in a party)	101
No. of hunters reporting for a party	22
No. of hunters with comments	132
No. of hunters with separate letters	23
No. of hunters whose letters were returned owing to wrong or unknown address	47
No. of letters returned but not completed, as licences issued to someone other than addressee	12
No. of game shot in 23 Regulated Townships, percent of hunters reporting in sample	4.6
Percent of hunters receiving hunter kit (entire survey)	10.2

<u>Percent of Total Bag</u>	<u>Estimated No. of Animals Shot In 23 Regulated Townships</u>
Pheasants 20.6	7,920
Cottontail Rabbits 46.8	18,000
Hares 16.6	6,500
Squirrel 2.8	1,100
Grouse 2.5	970
Ducks 8.1	3,140
Fox 2.2	880
99.6	

Estimated number of European hares taken in the remainder of the District: approximately 18,000 - 20,000; an actual figure was unobtainable. This means that about 24,500 to 26,500 hares were taken in the entire District.

1964

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Total hours hunted - 287 hunters	4,668	hunting hours
Ratio of Cottontail Rabbits/Hares	2.2/1	
Ratio of Cottontail Rabbits/Pheasants	2.9/1	
Ratio of Pheasants/Hares	1.6/1	
Ratio of Hares/Foxes	7.3/1	

Relative Bag For 100 Hunters/Hours In 23 Regulated Townships

Pheasants	7.4
Cottontail Rabbits	17.2
Hares	6.1
Foxes	0.6

Hunting Pressure By Regulated Townships

On attached map, hunting pressure per township is indicated.

N. Dumfries	non. regulated
Brantford	no hunting by-law
Tuscarora	Indian Reserve
Barton	no hunting
Burlington	no hunting south of #5 highway
Nassagaweya and Esquesing	no returns received

Fox Drives Reported But Not Included in Figures

<u>Township</u>	<u>Fox</u>	<u>Drives/hours</u>
Dereham	81	275
East Oxford	1	100
Blenheim	2	150
South Oxford	1	52
North Oxford	5	30
Burford	6	311
North Norwich	11	101

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Township	Hours	Pheasant	Cottontail	Hares	Squirrel	Grouse	Ducks	Fox
West Zorra	11	1	-	-	-	-	2	-
East Zorra	102	10	24	2	4	7	5	-
East Oxford	80	4	10	12	-	-	-	1
West Oxford	181	25	21	2	2	2	6	2
North Oxford	74	21	2	2	-	-	-	5
North Norwich	275	40	49	27	7	4	5	2
South Norwich	160	22	26	2	-	7	1	-
East Nissouri	70	14	5	16	-	-	2	6
Dereham	146	8	47	3	6	9	21	2
Blenheim	773	62	104	41	-	2	-	-
Saltfleet	313	27	108	5	-	1	2	-
Binbrook	68	1	6	4	-	-	-	-
Ancaster	421	42	115	7	5	3	4	2
West Flam.	317	6	117	7	22	-	7	2
East Flam.	214	5	40	1	2	-	9	-
Blandford	57	-	4	2	-	1	15	2
Burford	504	13	18	107	-	-	1	1
Oakland	13	1	1	-	-	-	-	-
South Lumfries	115	4	17	-	-	-	.6	-
Onondaga	90	4	2	-	-	-	42	-
Glanford	48	1	13	-	-	-	-	1
Beverly	68	-	1	6	-	-	5	-
Puslinch	100	-	6	5	-	-	-	8
Wilmot	307	5	39	31	1	4	4	4
Stephen	63	9	7	1	-	-	2	1
Hay	72	26	8	1	-	2	-	-
Nelson	26	-	8	-	-	-	-	-
	4668	351	798	284	49	43	139	39

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for the proper management of the organization's resources and for ensuring transparency and accountability.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It describes how these methods are applied to different types of information and how they help in identifying trends and patterns.

3. The third part of the document focuses on the interpretation of the data and the drawing of conclusions. It explains how the information gathered is used to make informed decisions and to develop strategies for the future.

4. The fourth part of the document discusses the challenges and limitations of the data collection and analysis process. It highlights the need for careful planning and execution to ensure the reliability and validity of the results.

5. The fifth part of the document provides a summary of the key findings and conclusions. It reiterates the importance of data-driven decision-making and the role of the organization in promoting a culture of continuous improvement and innovation.

LAKE HURON DISTRICT







LAKE
HURON

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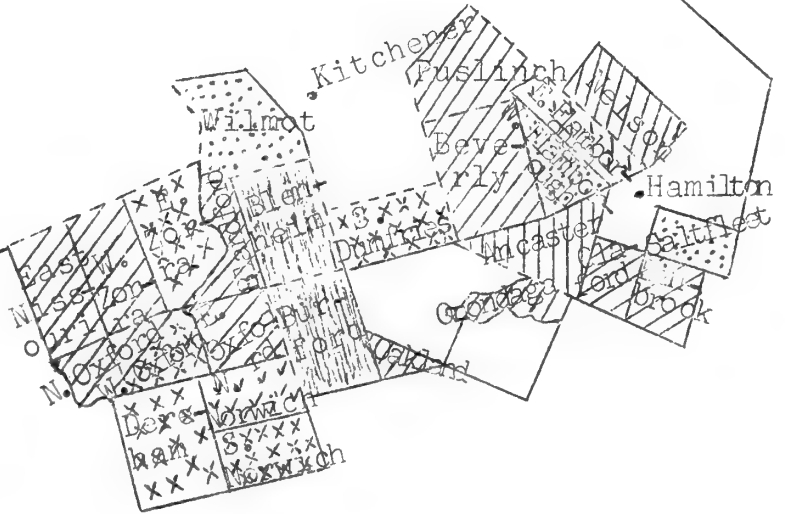
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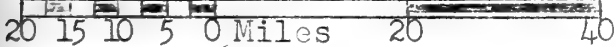
Hunting Pressure By Regulated Twp.

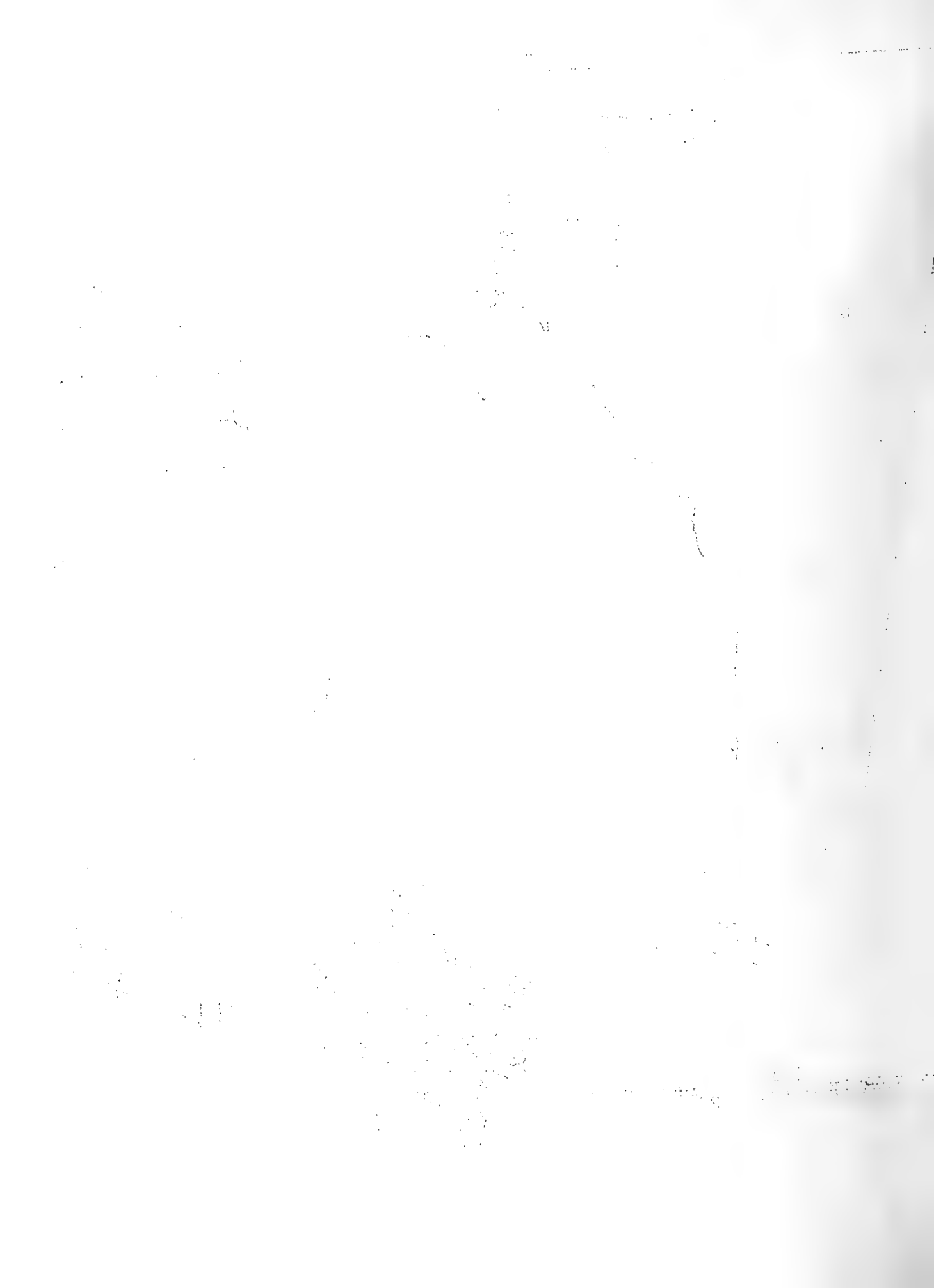
-  - 1-100 hours
-  - 100-200 hrs.
-  - 200-300 hrs.
-  - 300-400 hrs.
-  - 400-500 hrs.
-  - 500 and over.

May
Stephen



Scale





REPORT ON STATUS OF SHARP-TAILED GROUSE, KENORA DISTRICT

by
A. R. Olsen

Introduction

Up until a year or so ago, little interest was focused on the status of the Sharp-tailed Grouse in the Kenora District. At this time, Mr. Harry Lumsden from the Fish & Wildlife Branch, Maple, requested that all known locations of this species if any, be recorded, especially locations of "dancing grounds" used during the mating season, and the number of birds in each covey.

On this account, when regular patrol work was being undertaken, a sharp lookout was kept for Sharp-tails wherever the habitat appeared to be at all suitable for them, during the summer of 1959.

Previous to this summer, occasional small flocks or single Sharp-tails were noticed at different locations in the Kenora District, usually during the late fall or winter as they fed on birch buds.

Historical Data

Conversations with a number of "Old-Timers" in the Dryden area revealed that when they were establishing their homes and clearing bushland to begin a life of farming, Sharp-tailed Grouse moved in in large flocks and became numerous.

Several farmers called these birds "Prairie Chickens" but when given a description, or shown a picture of the two different birds, all claimed that the majority of the "Chickens" were Sharp-tails; however, Prairie Chickens or Pinnated Grouse were not uncommon at the same time.

The information received from these people is considered to be sincere and factual, as all seemed very interested because these large "Chickens" had been preferred for food rather than the much smaller Ruffed Grouse or Spruce Grouse.

These Sharp-tails seemed to have reached the greatest abundance during the 1920's, and since then, populations steadily diminished until only occasional flocks were seen, and strangely enough, these small remaining flocks were seen year after year with little difference in size.

Observations

Reference was made to several periodicals in order to glean reliable information concerning adequate Sharp-tail range.

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Particular reference was made to several editions of the Wisconsin Conservation Bulletin which contained many articles on Prairie Grouse surveys and management.

All locations where Sharp-tails were sighted would be classed as ideal range, but it was noticed that these articles made no particular mention of the importance of streams; streams were always close at hand where sightings were made in the Kenora District. The banks of these streams were covered with thick alder and hazel brush, very near a muskeg or swamp. Characteristic sighting locations were composed of abandoned farmland which had grown into grasslands, grain stubble fields, or in one instance, a cut-over area which had grown into small aspen. All locations had an abundance of cover nearby, which included small birch, aspen and jackpine, most of which seemed to be the results of regeneration on very old burns.

To date, only two "dancing grounds" have been observed in the District; the first of these was located through information received from a farmer in Melgund Township that a covey had used the same stubble field for years as a breeding ground. The location is Lot #8, Concession 6, Melgund Township, in an oat stubble field adjacent to a swamp and a creek. The area was checked on several occasions from February 15, 1959 on, during routine patrols, but no Sharp-tails were seen until April 7th, when six birds were observed at 3:30 p.m. These were cavorting and dancing on this ten-acre field into two separate groups of three each, approximately 100 yards apart. On April 9th, at approximately 9:00 a.m., this flock was again noticed dancing on the grounds. They paid little attention as the vehicle was driven within 100 feet of the main covey and did not flush until one bird was shot for a specimen. Eleven birds flew to another field 500 yards distant and settled down. On three other occasions this area was visited at different times of the day, ranging from dawn to dusk, and each time the birds were dancing; the numbers of birds ranged from four to nine. On April 12th the area was checked several times but no birds were observed, the mating season apparently being over. During the summer and fall there was no evidence of this flock although no special effort was made to locate them.

On April 8, 1959, six Sharp-tails were observed "dancing" on Lot 1, Concession 5, Sanford Township. This location is a stubble field of approximately five acres and the dancing was taking place on the south edge, within 10 feet of an alder thicket through which runs a small stream. When this covey was flushed, two of the total six birds were identified as Pinnated Grouse. Unfortunately, this area was not visited again, but since it falls into the class of ideal habitat it will be kept under observation in future.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support effective decision-making.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and reporting, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that data is used responsibly and ethically.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and aligned with the organization's goals.

6. The sixth part of the document provides a detailed overview of the data collection process, including the identification of data sources, the design of data collection instruments, and the implementation of data collection procedures.

7. The seventh part of the document discusses the various methods used for data analysis, such as descriptive statistics, inferential statistics, and regression analysis. It explains how these methods are used to interpret the data and draw meaningful conclusions.

8. The eighth part of the document focuses on the importance of data visualization in presenting the results of data analysis. It discusses various visualization techniques, such as bar charts, line graphs, and pie charts, and their effectiveness in communicating complex data.

9. The ninth part of the document addresses the ethical considerations surrounding data management and analysis. It discusses the need for transparency, informed consent, and data protection to ensure that the organization's data practices are ethical and compliant with relevant regulations.

10. The tenth part of the document provides a final summary and concludes the report. It reiterates the key findings and recommendations and expresses the hope that the information provided will be useful to the organization's management and stakeholders.

11. The eleventh part of the document discusses the future directions of data management and analysis. It highlights emerging trends, such as the use of artificial intelligence and big data, and the need for organizations to stay up-to-date with the latest developments in the field.

12. The twelfth part of the document provides a detailed overview of the data collection process, including the identification of data sources, the design of data collection instruments, and the implementation of data collection procedures.

13. The thirteenth part of the document discusses the various methods used for data analysis, such as descriptive statistics, inferential statistics, and regression analysis. It explains how these methods are used to interpret the data and draw meaningful conclusions.

Since September 15, 1959, eight other locations inhabited by Sharp-tailed Grouse were investigated, all falling into the category of what has been described by experts as perfect habitat in Wisconsin, Michigan and other places where Sharp-tails are found. The flocks observed ranged in size from two to 16.

One resident directed me to a field in Mutrie Township where he knew of a covey of four or five Sharp-tails. This flock, the only flock in the area, was known to reappear year after year and did not grow any larger in size. I visited the exact location recently, as this flock supposedly returned in the fall, and with very little searching, I flushed a covey of eight Sharp-tailed Grouse. Apparently the flock is beginning to grow.

This experience has run true for all reported locations, for in all cases the located covey contained a larger number of birds than was reported - in some cases, double the suggested number.

Two specimens were taken during this autumn period and will be forwarded to Maple for taxonomic purposes. These specimens were taken from Locations No. 7 and No. 8, shown on the attached map.

Altogether this past summer, 72 Sharp-tailed Grouse have been seen, this being the aggregate of 10 flocks of birds. During routine patrols since September 15 this year, as many or more Sharp-tails have been counted as Ruffed Grouse. These were all spotted on fields while driving. This, in my estimation, is a very small percentage of the total population of Sharp-tailed Grouse in this area.

Established locations of Sharp-tailed Grouse flocks are as follows and include only those flocks which were personally observed; other locations reported have been recorded but are not included here.

<u>Month</u>	<u>Map Location Number</u>	<u>Area</u>	<u>No. In Flock</u>
April	1	Lot 8, Con. 6, Melgund Twp.	12
April	2	1 mi. south of Flambeau L. Dryden Paper Co. Limits	2
September	3	N 1/2 Lot 8, Con. 6, Wainwright Twp.	2
September	4	Lot 12, Con. 1, Britton Twp.	5
September	5	Lot 1, Con. 1, Rugby Twp.	6
September	6	Lot 10, Con. 6, Aubrey Twp.	8
April (specimen)	7	N 1/2 Lot 1, Con. 5, Sanford Twp.	6
April (specimen)	8	N 1/2 Lot 4, Con. 1, Sanford Twp.	7
April	9	Lot 9, Con. 1, Sanford Twp.	16
April	10	Lot 11, Con. 5, Mutrie Twp.	8

Exploitation of This Species

During the recent hunting season only two Sharp-tails have been reported killed by grouse hunters. This is quite understandable as most grouse hunters merely drive their cars on side roads and shoot what is encountered on the roads. Most of these hunters carry .410 gauge shotguns or .22 calibre rifles and these would prove very ineffective for Sharp-tails as these grouse are quite timid and flush well out of range for a gun smaller than a .12 or .16 gauge. Should a Sharp-tail be shot by a hunter, it probably would be mistaken for an unusual Ruffed Grouse, with little notice being made of it. There is absolutely no hunting pressure purposefully directed towards this species anywhere in the District.

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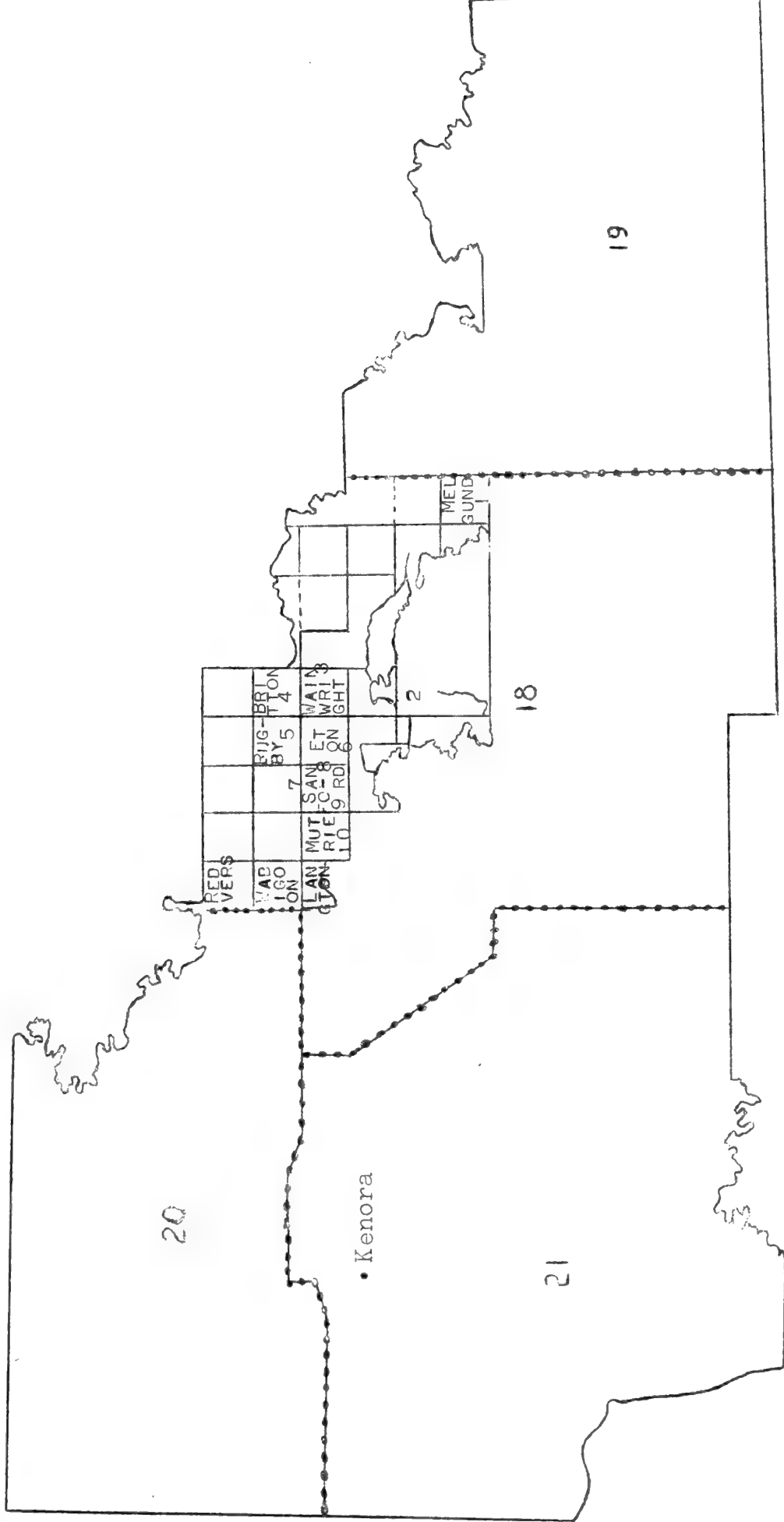
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KENORA DISTRICT - Showing Sharp-tail Grouse Covey Locations





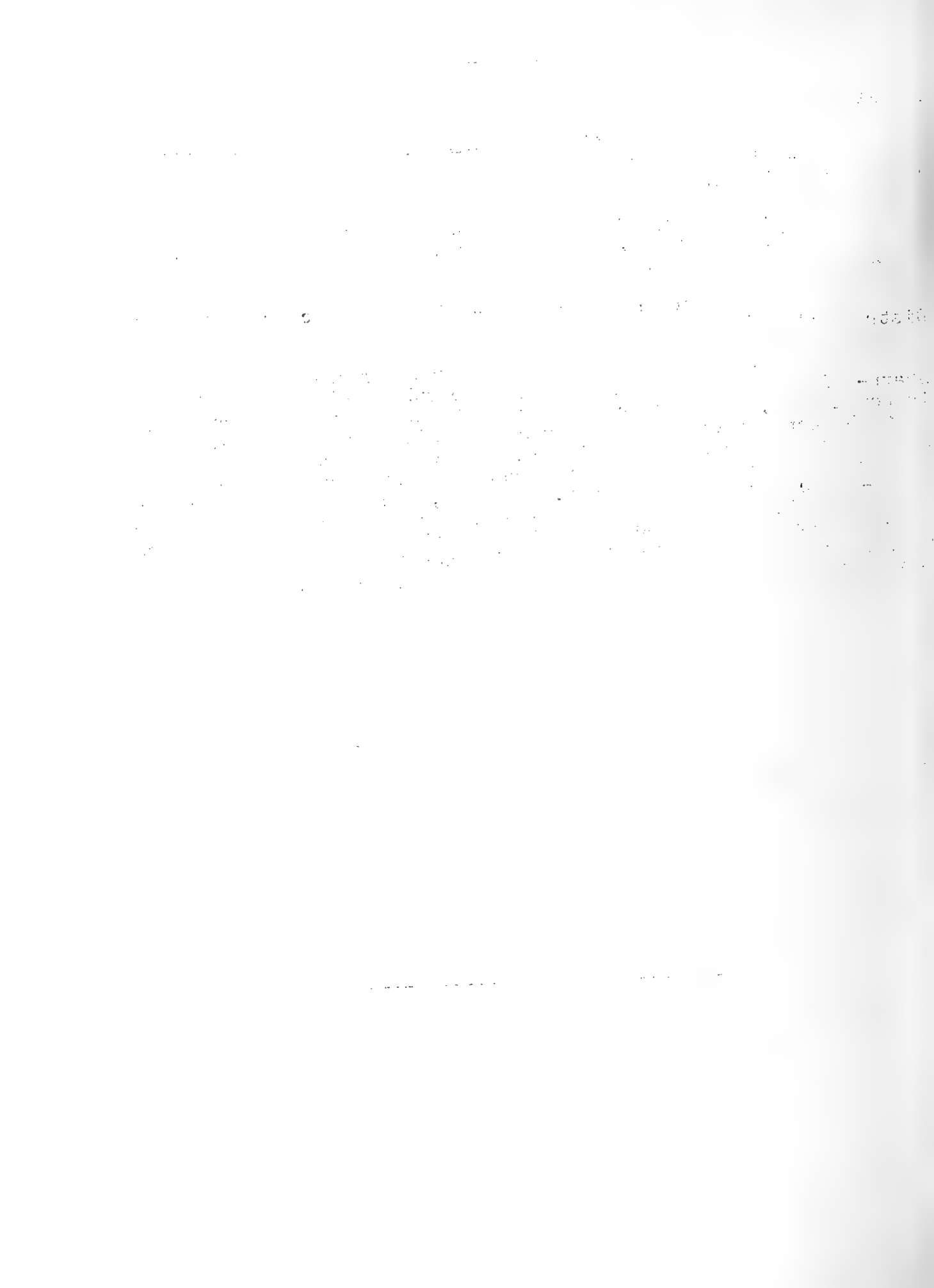
Summary:

Conversations with older folk in the Dryden area indicate that Sharp-tails were once fairly common when pioneer farms were being established.

During 1959, 72 birds were observed while routine patrol work was being conducted. These birds were seen in flocks, ranging in size from two to 16.

There is no specific Sharp-tail hunting carried on in the District at this time.

Although there has not been enough survey work done on the Sharp-tailed Grouse in this District to substantiate any estimate in population, it is my opinion from the observations I have made that the population is much higher than might have been expected. It also seems apparent that the population is on a steady incline rather than a decline, as is the case in most localities where Sharp-tails were once abundant. However, I do not suggest that the population is anywhere near as extensive as that of the Ruffed Grouse. There is considerable habitat suited to the requirements of Sharp-tailed Grouse in the District, but it cannot be compared with the amount of suitable range available to Ruffed Grouse.



THE WILD TURKEY IN SOUTHWESTERN ONTARIO

by
O.L. Mellick and L.J. Stock

This report summarizes the reports and observations of the wild turkey population in this District from 1951 to 1958. It supplements the report by C.O. Bartlett (Feb. 25, 1952)* and at this time (Dec. 1959) it seems likely that the wild turkey has again become extinct in this area where once it was native.

In addition to the six birds (two toms and four hens) released in the Pinery in May, 1949, 30 young birds were reared at the Normandale Pheasant farm and released in 1955, five pair to each of three locations, Rondeau Park, Mosa Township and Normandale.

The release at Rondeau was short-lived - apparently wiped out by blackhead and tuberculosis. Those in Mosa Township produced at least two broods the following summer but did not survive until the next year. The frequent reports from the Normandale - St. Williams locality were encouraging but for more than a year now there has been no evidence or report that there are any survivors.

The original six birds released in May, 1949, in the Pinery had increased to 45 - 50 by October 1955, and to 75 by November, 1956. The flock build-up then collapsed and despite frequent inquiries and a ground search by Departmental personnel over some of the more likely areas, there was, by 1958, only one unconfirmed report of one bird in Lambton County.

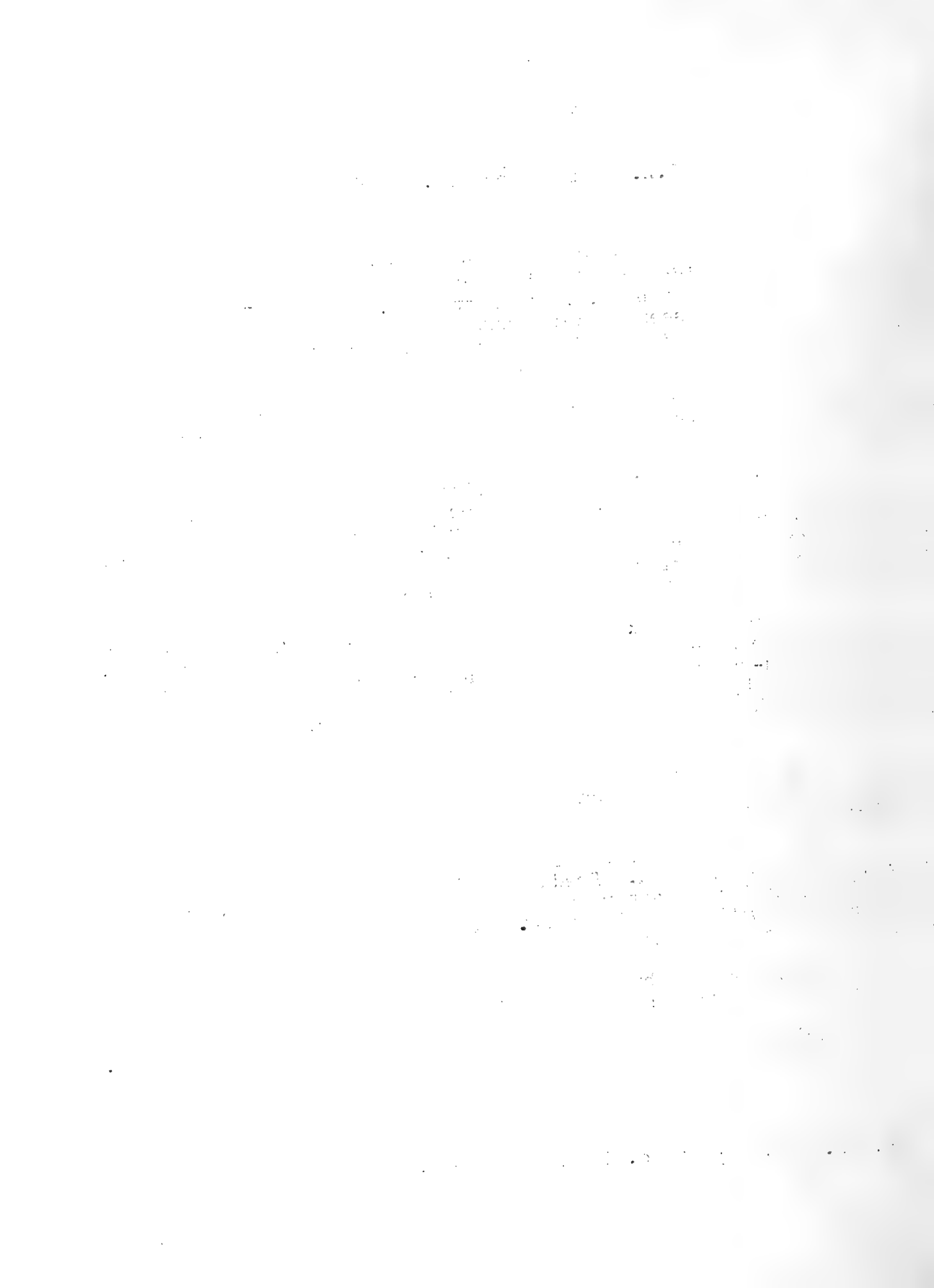
During the winter of 1956-57 a complete deer inventory of the entire district was conducted, but no trace of the turkeys could be found, although 10% of the area was searched.

The cause or causes for the disappearance of the turkeys is unknown, except at Rondeau. Predators, illegal shooting, and disease are possible, with the latter the more probable, if the wild birds came in contact with domestic stock. However, the true cause will probably never be known with any certainty.

It is possible but extremely unlikely that some still survive and that another population will build up in the future.

Included are some old records of known Ontario wild turkeys.

* See F. & W. Mgt. Report No. 10, March, 1953.



THE WILD TURKEY IN SOUTHWESTERN ONTARIO

Year	Season or Month Observed	Number and Sex of Birds Seen	Locality Where Seen	Observer	Remarks
1950/51	Winter	Flock of 30	Smith Lake		Reported by Dr. Haigmire Oct. 11/59
1951	Aug. 15th Sept. 15th	3 birds	Smith Lake		
1952	March	2 birds	Lambton Co.		A decrease in numbers was indicated this year in Lambton
1953	April	1 pair	Pinery		
	August	1 hen and 3 poults	Pinery		
1954	April	1 pair	Ft. Franks		
	Aug. 13th	1 hen and 11 poults	South of Ipperwash Military Camp Lambton Co.	O. Mellick	
1954-55	Winter	1 hen - seen twice	Mosa Twp.	Resident	
1955	Spring	30 birds (second release in Lake Erie District)	Normandale Pheasant Farm		
	June	One nest, believed to be one of two and a number of Juveniles	St. Williams	Resident	} Reported by Jim Anderson Hatchery Manager Normandale
	June 28th	One brood, worried by a dog	St. Williams	Resident	
	July	1 pair adults 14 poults	Mosa Twp. Lot 27, Con. X	Resident	
					Seen twice during the same day

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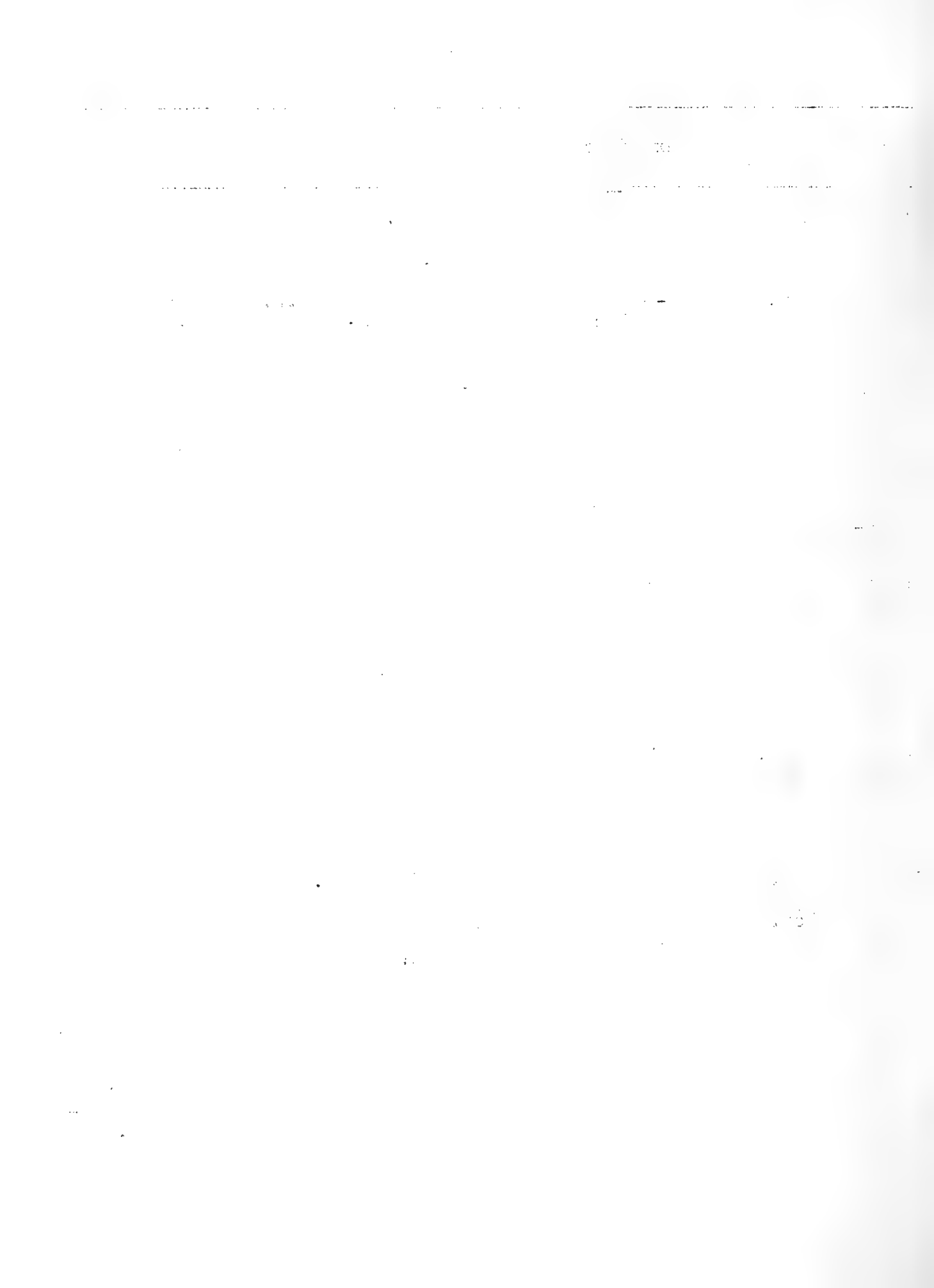
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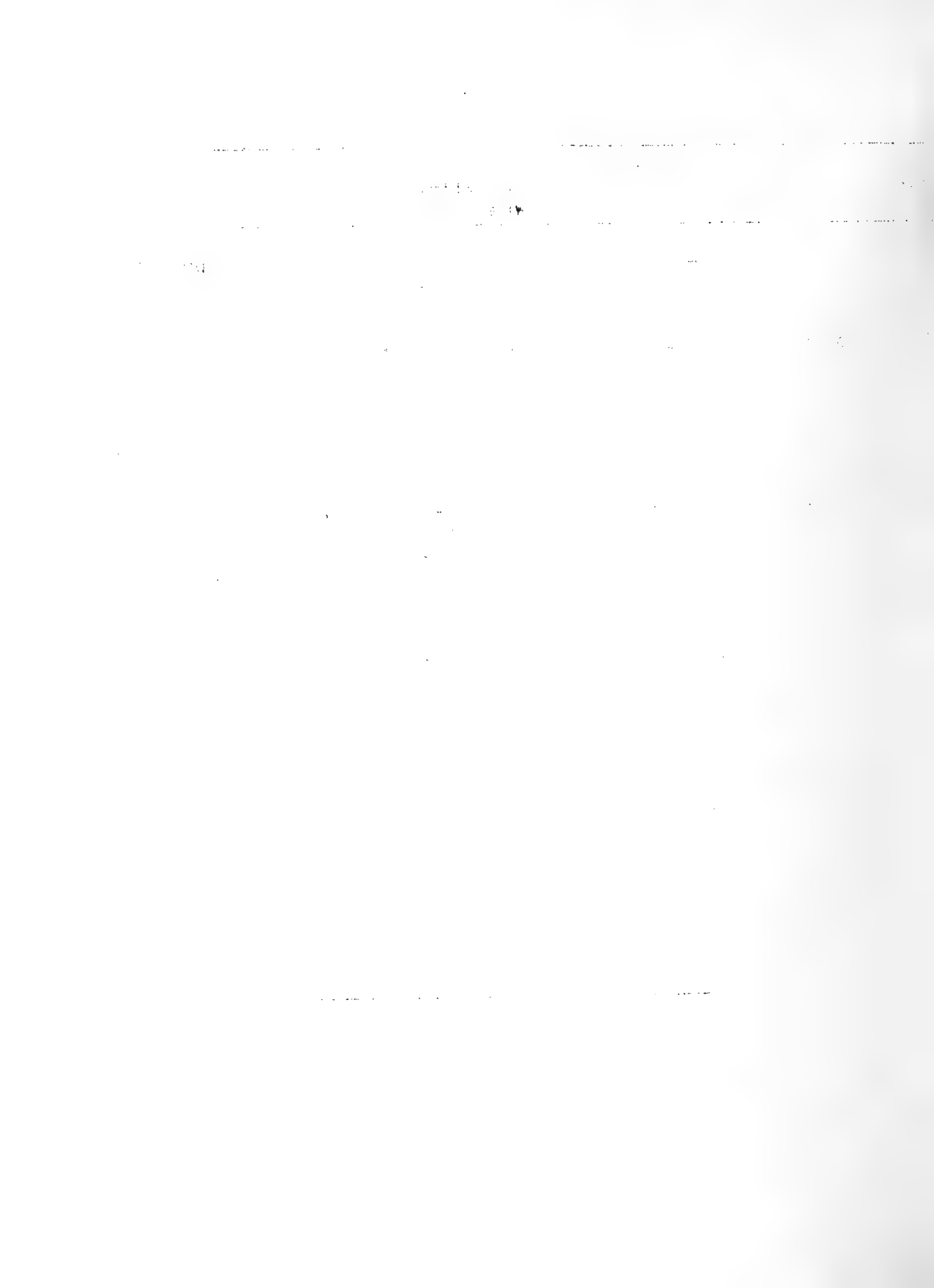
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Year	Season or Month Observed	Number and Sex of Birds Seen	Locality Where Seen	Observer	Remarks
1955	September	1 adult 4 poults	Mosa Twp. Lot 24, R.I.N.	Resident	
	Oct. 1st	45-50 in one flock	Bosanquet Twp. Lots 32- 33 L.R.W (2 miles east of Ft. Franks)	O.P.P. Officer	Reported by O. Mellick
	Dec. 14th	1	Port Rowan		Reported by J. Anderson
	Nov. 29th	27 birds	Warwick Twp	O. Mellick	
1955-56	Winter	Occasional sightings	Normandale Area	Resident	Reported by J. Anderson
1956	Jan. 23rd- 28th	2 birds (one hen probably a Juvenile)	Port Rowan		Reported by J. Anderson
1956	Summer	1 pair adults 7 poults	Charlotte- ville Twp. Lot 9, Con.B		Reported by J. Anderson
1956	Sept. 15th	Flock of 30-50	Turkey Point		Reported by J. Anderson (several unconfirmed reports)
	Oct. 20th	1 pair	Normandale	J. Anderson	
	Nov. 4th	Flock of 12-15	Middlemiss Lot 1 Range V, Ekfrid Twp.	Mrs. Florence Grass, Resident	Seen in early morning flying across the road into Muncey Indian Res. Flock also seen by a neighbor one month prev- iously.



Year	Season Or Month Observed	Number and Sex of Birds Seen	Locality Where Seen	Observer	Remarks
1956	October	40-50 birds	Pinery Lambton Co.		Reported by Dr. J. K. Reynolds
1956	November	75 birds	Bosanquet Twp. (Haig Farm Area)	Mr. Ron Fulcher	Flushed and scattered quickly when disturbed Reported by O. Mellick Nov. 30/56
1957	January	17 birds	Charlotte- ville Twp. Lot 9, Con. B	Mr. F. Geraux	Birds were seen feeding Reported by J. Anderson
1958		7 birds	Normandale		
		1 bird	Lambton Co.		



PELEE ISLAND PHEASANT SHOOT, 1959
STATISTICS AND COMMENTS

by
L. J. Stock

Statistics Based on Hunter Questionnaire

Sample Size 8%

Season - Oct. 28th & 29th

Bag Limit - 8 cocks, 2 hens

Licences sold	Non-resident	937	
	Complimentary & Resident	200	
	Total		1137
Total Cocks Bagged		6322
	Per Hunter	5.56	
Total Hens Bagged		2028
	Per Hunter	1.88	
Total Birds Bagged		8350
	Per Hunter	7.44	
No. of hunters with full quota	352	=	31%
No. of hunters with quota of cocks	405	=	35.6%
No. of hunters with quota of hens	1030	=	90.6%
No. of hunters who hunted 1st day only	188	=	16.5%
No. of hunters who hunted both days	949	=	83.5%

Hunter Success

Hunters who hunted first day only	Hunters who shot limit of cocks (1st day only)
Cocks bagged per hunter - 7.8	Cocks per hunter - 8.0
Hours per hunter - 5.9	Hours per hunter - 6.1
Cocks per hunter hour - 1.25	Cocks per hunter hr. - 1.2
Average number of hours in the field per hunter - 10.1 (all hunters all season)	
Total birds bagged per hunter - 7.44 (all hunters all season)	
Birds per hunter hour - 0.74 (all hunters all season)	

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both primary and secondary sources, as well as the specific techniques employed for data processing and statistical analysis.

The third section provides a comprehensive overview of the results obtained from the study. It highlights the key findings and discusses their implications for the field. The author also addresses any limitations of the study and suggests areas for future research.

Finally, the document concludes with a summary of the main points and a final statement on the significance of the work. The author expresses gratitude to the funding agencies and the research team for their support and contribution to the project.

The July Estimate Vs. the October Estimates - Based on Questionnaires)

Cocks

Total Bag	6322
Less imports (Est. 90% survival)	<u>-900</u>
Bag of native cocks	5422
Plus loss and illegal kill (15%) (Native cocks only)	<u>+813</u>
Total kill - Native cocks	6235
Plus stock (est) Contributed by native birds only	<u>625</u>
Total Cock Population (Oct. 1959)	6860
Estimate of Population in Oct. (July survey)	<u>8004</u>
Difference	-1144 (-14.3%)

The estimate in July is 14.3% higher than the population indicated by hunting statistics. Factors contributing to the error could be:

1. A high estimate in July,
 2. Higher than average mortality from July to the hunt,
 3. A higher than estimated loss from crippling and illegal kill,
 4. Inaccuracies in the questionnaire.
- Some of these factors could be working to reduce the population from July to the end of the shoot.

Hens

(Native) surviving to October (July estimate)	14,537
Less bag	<u>2,028</u>
	12,509
Less loss and illegal kill (est)	<u>2,028</u>
Post shoot population (based on July estimate)	10,481

Since the July estimate for cocks was 14.3% higher than the population indicated at the shoot, the population of hens after the shoot is revised. A reduction of 20% is estimated due to the higher mortality rate of hens.

Revised post shoot estimate

Estimate based on July survey	10,481
Less 20% (est)	<u>2,096</u>
Final post season estimate	8,385

(Assuming that the mortality of hens would be higher than cocks from July to the shoot and that the crippling loss would be greater for hens).

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Summary of Post Season Population - Based on Questionnaire

Cocks	750
Hens	8,385
Total	9,135
Cock:Hen Ratio	1:11.2

Crippling Loss

Birds hit and not retrieved - both days

Cocks - Total	1480
Per hunter	1.39
% of bag	23.
Hens - Total	523
Per hunter	0.46
% of bag	26.
Total -	2003
Per hunter	1.76
% of bag	24.

Birds seen and not picked up

Hunters who reported seeing no dead birds in the field totalled 57%. The remaining 43% saw at least one.

First Day - Average number seen per hunter	0.5
Total number seen per hunter	1114
Second Day - Average number seen per hunter	0.52
Total number seen per hunter	493
Total seen and not picked up	1607

Birds picked up shot by another

Cocks	326
Hens	705
Totals	1031

Birds picked up shot by another included in the hunter's bag

Cocks	280 (86% of birds picked up)
Hens	162 (23% of birds picked up)
Totals	442
Not included in the bag (57% of those picked up)	589
Hens picked up and given to Conservation Officers (not seized)	72
Unaccounted for	517
Cocks	46 (14% of those picked up)
Hens	543 (77% of those picked up)
Not included in bag	589
Less	72 (handed in to Conservation Officers)
Net	517 (cocks 46 - hens 471)

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The 517 were picked up but not included in the bag and not handed over to Conservation Officers - disposition unknown.

Crippling Loss Data for 1958 and 1959 Compared

This is presented in an attempt to throw some light on the perennial problem of the crippling loss. The percentage of the bag involved in each category in the years compared, is worthy of note, and certainly indicates that this method of collecting information from hunters has value. If gross errors are present, they are at least constant from year to year. This is supported by other factors - hunting pressure which was constant and weather which has been remarkably good for the past five years.

The percentage of birds reported hit and not retrieved is practically the same as for the total number seen dead in the field. The unknown number here are those cripples showing no evidence of being hit which die later, and the dead birds which are never found.

Hunters find and pick up birds equal to 12% of the total bag. No doubt many more hens would be picked up if hunters were encouraged to do so. The problem is a choice between wasting birds and opening the door to excessive shooting of hens.

Tabulation Data Follow:

Crippling Loss Data for 1958 and 1959 Compared

	1958		1959		Difference	
	No. of Birds	% of Bag	No. of Birds	% of Bag	No.	% of 1958
<u>All Hunters Both Days</u>						
Hit and not retrieved	2,584	23	2003	24	-581	-22
Seen dead in the field	2,878	25	2638	22	-240	- 8.3
Seen dead & not picked up	1,553	14	1607	19	+ 94	+ 6
Seen dead and picked up	1,325	12	1031	12	-294	-22
Picked up and included in the bag			442	5.3		
<u>Total Bag</u>	<u>11,227</u>		<u>8350</u>		<u>-2877</u>	<u>-26</u>
<u>Bag Limit</u>	9 C 2 H		8 C 2 H			

Statistics Based on Hunter Bag Checks - Sample Size 8.7%

Hunters were contacted prior to boarding the boat to leave the Island, therefore the hunt was complete in all cases.

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No. of hunters checked		110
No. of cocks bagged per hunter	6.24	
Total		7095
No. of hens bagged per hunter	2.0	
Total		2274
Total birds bagged per hunter	8.24	
Total bag		9369

These data, when compared to those derived from questionnaires, indicate an increase in the kill of cocks of 773 or 12.2% and of hens 246 or 12.0%.

When the bag check data are compared to the population estimate made in July, the results are as follows:

Population Estimates Compared - July estimate vs. hunter bag check estimate

Cocks (native) alive at the shoot (July est.)		8004
Plus imports (est. 90% survival)		<u>900</u>
Total Cocks before the shoot		8904
Total bag	7095	
Loss and illegal kill (15% of bag est.)	<u>1064</u>	
Cocks alive after the shoot	750	
Total population (pre shoot)		8909

Difference is only 5 birds

Hens alive at the shoot (July est.)		14537
Total bag	2274	
Loss and illegal kill (est.)	2274	
Total kill		<u>4548</u>
Post shoot population		9989

For Comparison

Post season population (based on questionnaire)		10481
Post season population (hunter bag checks)		<u>9989</u>
Difference		492 hens
(-3.4% of July Estimate)		
Cock/Hen Ratio	1:13.3	

There were no crippling loss data collected on the hunter bag checks.

Statistics based on: 1. Hunter questionnaires, and
2. Hunter bag checks
are presented for comparison. Either method indicates a population at the shoot which is reasonably close to the estimate made at the close of the July survey.

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Imported Birds

One thousand cocks were released on the Island about mid-October. One hundred and fifty to two hundred adult cocks were released in the spring.

Number of hunters contacted in the field by Departmental officers was 22% of the total during the two days. Two experienced officers supervised the hunt.

Sources of Error in the Questionnaires

One source of error was obvious this year. Ten percent of the hunters reported shooting their quota the first day, and at the same time reported hunting hours on the second day. This shows that the questionnaires were not accurately completed or that the hunter shot for another member of the party on the second day but did not report his success.

Hours of hunting and the number of birds bagged are influenced by the fact that thirty-six percent of the hunters cease hunting at noon of the second day regardless of the number of birds shot or the weather. This year some hunters with dogs reported good hunting on the afternoon of the second day in some sections of the Island.

Pelee Pheasant Survey - July, 1959 - Population Estimate & Comments

Pheasant Population Estimate - Pelee Island, July, 1959

Hens alive after the shoot 1958 (Kelker Index)		11,712	
Mortality (Nov., 1958-July, 1959) 25% (Estimated)		<u>2,928</u>	
Hens alive July, 1959		8,784	
Less broodless hens (43.2% July, 1959 survey)		<u>3,794</u>	
Hens nesting July, 1959		4,990	
Average brood size (34 broods counted - all ages)	7		
No. of chicks present			34,930
Chicks surviving to the shoot (43% est.)			15,020
Juvenile cocks		7,510	
Juvenile hens		7,510	
Adults surviving to the shoot: Cocks (70% est.)		494	
Hens (60% est.)		7,027	
Total population at the shoot: Cocks		8,004	
Hens		<u>14,537</u> 22,541
Probable Hunters: Non-resident		1,000	
Resident		200	
Total		<u>1,200</u>	
Indicated bag		6 Cocks	
		3 Hens	
Presented to the Pelee Council in round figures-			
Cocks	8,000	} Preliminary Estimate	
Hens	14,600		
Bag recommended by Council: Cocks		8	
Hens		2	

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Crop Conditions

Spring seeding was delayed by frequent spring rains. This was followed by unusually dry, hot weather which brought soy beans and some varieties of corn into flower two weeks earlier than normal. The native *Hybiscus palustris* was in full bloom during the survey for the second time in five years. The other occasion was in 1955 when the spring and early summer were exceptionally mild.

Some wheat was winter killed and the fields replanted to soy beans.

Rains in July improved the outlook for a near normal crop.

Weather

During the past winter severe ground ice occurred similar to that experienced on the mainland. On January 19th and 20th there was a snowfall of 7.5 inches, followed by 1.97 inches of rain on the 21st. The temperature then dropped to 7°F freezing the wet snow before it melted. Again on January 25th and 26th, five inches of snow was followed by 0.95 inches of rain with freezing temperature. Winter wheat was killed under the resulting ice.

During February only 1.5 inches of snow and 2.46" of rain fell. However, the temperature was below freezing every night and above freezing for only 17 days. The ice persisted under these conditions for several weeks.

Soy beans, which provide much of the winter food for pheasants, were consequently unavailable, and a food shortage may have developed. Spring and summer conditions may be illustrated by comparing the rainfall recorded on the Island.

Rainfall

	<u>April</u>	<u>May</u>	<u>June</u>
1957	2.39"	2.36"	3.70"
1958	2.92	1.71	3.73
1959	4.69	5.05	1.29

The Detroit Meteorological Station recorded less rainfall during June, 1959, than in any previous year of operation.

A departure from normal however occurred on June 6 and 7 on the north half of Pelee when a storm with high winds brought an estimated one to two inches of rain. Some pheasant nests were flooded and some mortality probably resulted from this storm.

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No doubt some re-nesting followed this storm, but the production curve, leading to the peak of the hatch failed to show any interruption in brood production. This curve is plotted for weekly intervals.

Final Pheasant Population Data In July 1959 Compared to 1958

			<u>Difference</u>	
	<u>1958</u>	<u>1959</u>	<u>Number</u>	<u>Percent</u>
Total Broods Counted	482	236	-246	-51
Total Cocks	62	39	- 23	-37.1
Total Hens	620	409	-211	-34
Broodless Hens Count	139	177	+ 38	+27.3
Percent	22.4	43.2		
Broods Per Mile	3.5	1.7	-1.8	
Cock/Hen Ratio	1/10	1/10.5		

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the tools used for data collection.

3. The third part of the document presents the results of the study, including a comparison of the different methods and techniques used. It also discusses the limitations of the study and the need for further research.

4. The fourth part of the document provides a summary of the findings and conclusions. It highlights the key points of the study and offers recommendations for future research and practice.

5. The fifth part of the document contains a list of references and a list of figures. The references include a list of books, articles, and other sources used in the study. The figures include a list of tables and charts used to present the data.

6. The sixth part of the document contains a list of appendices and a list of footnotes. The appendices include a list of additional information and data used in the study. The footnotes include a list of additional information and references.

7. The seventh part of the document contains a list of acknowledgments and a list of contact information. The acknowledgments include a list of individuals and organizations that provided support and assistance during the study. The contact information includes a list of the authors' names and addresses.

8. The eighth part of the document contains a list of glossary and a list of abbreviations. The glossary includes a list of terms and definitions used in the study. The abbreviations include a list of abbreviations used in the study.

9. The ninth part of the document contains a list of index and a list of subject matter. The index includes a list of page numbers and corresponding page numbers. The subject matter includes a list of topics and sub-topics covered in the study.

10. The tenth part of the document contains a list of appendices and a list of footnotes. The appendices include a list of additional information and data used in the study. The footnotes include a list of additional information and references.

LAKE ERIE SMELT HARVEST BY SPORTS FISHERMEN, 1959

by
J. D. Roseborough

Introduction

In 1957, as a Conservation Officer Project, D. Bailey kept records of the numbers of cars entering Point Pelee National Park, and of a sample of the number of pounds of smelt taken out in cars during the two week period of the smelt spawning run. Although the records were not complete enough, this first attempt (1) established a method by which an estimate of the smelt harvest could be made, (2) indicated the gross errors to be corrected in collecting the data, and (3) assisted in training the Conservation Officers in carrying out the survey.

In 1958, under the supervision of the late E. A. Roberts, the survey was repeated. The data recorded were more complete. The intensity of the survey was increased. The report prepared by E. A. Roberts and J. D. Roseborough during D. Bailey's absence due to illness, indicated that at Point Pelee some 16,000 smelters caught 1,450,000 pounds of smelt from April 15th to 29th, 1958. In comparison to the 3,700,000 pounds of smelt taken commercially in 1957, the smelt sport-fishery was a significant portion of the total harvest.

In 1959, this survey was repeated with refinements on Point Pelee under the supervision of J. A. Toll and duplicated in 21 other areas along the north shore of Lake Erie by the Conservation Officers not directly involved at Point Pelee, in order to assess the total harvest by sports fishermen (smelters) on Lake Erie.

Method

The following areas were chosen by the local officers in each area for study. The numbers indicated here are used in the rest of this report:

<u>Area #</u>	<u>Description</u>	<u>Surveying Officer</u>
1	Leamington Dock to Point Pelee Gate	Bailey
2	Point Pelee National Park	Toll, Bailey, Greenwood, Owen
3	Mersea Township East of Point Pelee	Bailey
4	Kent County Beaches	Owen
5	Erieau to Morpeth	Martin, McIntyre
6A	Port Stanley	Neill, Beck
6B	Port Bruce	Neill, Beck
6C	Little Otter Creek	Stewart
7	Port Burwell - West Beach	Stewart

The first part of the document discusses the importance of maintaining accurate records for all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity and reliability of the financial data.

Furthermore, it is noted that regular audits are necessary to identify any discrepancies or errors in the records. This process helps to maintain transparency and accountability throughout the organization.

In addition, the document highlights the need for clear communication and collaboration between all departments involved in the financial process. This ensures that everyone is on the same page and working towards the same goals.

Overall, the document concludes that a strong foundation of accurate records and effective communication is crucial for the success of any business or organization.

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The second part of the document provides a detailed overview of the current market conditions and the impact of recent economic changes. It analyzes various factors that are influencing the market and offers insights into potential future trends.

It is expected that these conditions will continue to evolve, and organizations should remain vigilant in monitoring the market and adjusting their strategies accordingly.

<u>Area #</u>	<u>Description</u>	<u>Surveying Officer</u>
8	Long Point Beach	Allan
9	Turkey Point Beach	Allan
10	Normandale Beach	Anderson
11	Fisher's Glen	Finch
12	Port Ryerse	Finch
13	Port Dover	Finch
14	Featherstone Point (Selkirk)	McKeown
15	Sandy Bay (Port Maitland)	McKeown
16	Ratheon Point	McKeown, Howell
17	Sunset Bay	McKeown, Howell
18	Port Colborne	Muma
19	Burnaby Bay	Muma
20	Niagara River at Fort Erie	Muma, Arbuthnot

Some areas, Point Pelee, Kent County, Erieau to Morpeth, Port Stanley, Turkey Point, Port Ryerse and the Niagara River were censused adequately. The other areas were censused for less than six days out of 14, and the calculations are rather unreliable, but are included nevertheless.

The Officers were provided with survey cards, a sample of which is attached as Appendix I. Spaces allowed the recording of the "Area" surveyed, the "Date", and the count of "Total Cars" seen at any one time. The latter corresponded with the car count at Point Pelee, and although this number represented a minimum figure for the cars present, it was used as a basis for all calculations. In addition, 22 spaces were provided for recording the individual interviews with parties of smelters in a car. The number of smelters (#Men) and number of pounds of smelt (#Pds) in each carload was recorded in these spaces. Between 10 and 20 carloads were interviewed each night.

The information obtained from the individual interviews was used to calculate the "No. of fishermen per car" and "No. of pounds of smelt per car", which calculations were entered in the spaces provided.

Calculations

The cards were collected and the data were transferred to the form shown in Appendix II, "Smelt Harvest Survey Summary."

The number of men per car and the number of pounds of smelt per car were multiplied by the number of cars counted to give a total number of "smelters" and a total harvest of smelt in pounds, for each date.

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The summary of activity is shown as Appendix III in a table. It indicates that officers, on 131 nights during the run at all locations, counted 14,784 cars and interviewed 1,814 carloads of smelters. (The representative smelters numbering 6,502 were reported to have taken 266,343 pounds of smelt). On the basis of calculations, officers actually counted cars, smelters, and pounds of smelt to indicate that 52,059 smelters harvested 2,837,333 pounds of smelt. (An average of 147 pounds per 3.6 men per car).

Estimates

Since not all days were surveyed in each area, the above data are quite incomplete. It was felt desirable to estimate the number of smelters and their harvest on a 15 day basis for each area. To do this it was necessary to compare an incompletely surveyed area with one where the data were complete and reliable. The Point Pelee data served this latter purpose.

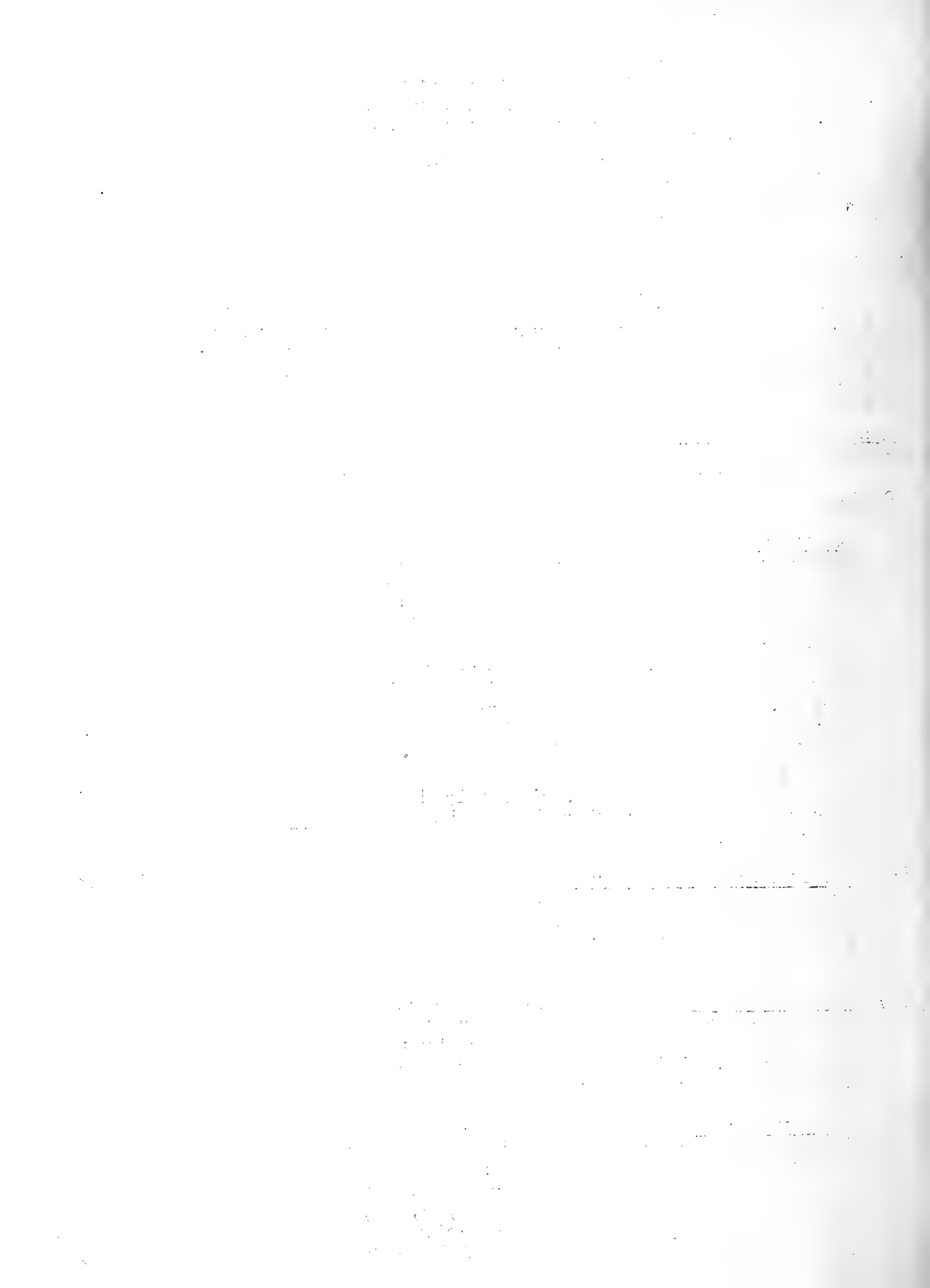
Method of Estimating

Each area which was incompletely surveyed was treated as follows:

- (a) Smelters: The percentage of smelters on each day at Point Pelee was computed, and compared with the data available for the other areas. In Area #4 for instance, the survey data indicated 228 smelters on nine days of the survey during April 13 to 27th. On these nine days at Point Pelee 68.2% of the smelters were recorded. Therefore, in Area #4, it was estimated that instead of 228 smelters (68.2%), there were actually 334 smelters (100% on the basis of Point Pelee distribution) during this 15-day period. The number of smelters on each of the six days not surveyed was calculated on the basis of the Point Pelee distribution to give a 15-day total of 334.

Each day not surveyed during a 15 day period was treated in this way and the number of smelters that would have been counted was calculated.

- (b) Smelt harvest per person: A factor for the pounds of smelt per car on each day at Point Pelee was similarly computed and compared with data available for the other areas. The estimated rates on each day were calculated for the days not surveyed in the 15 day period.
- (c) Total harvest: The estimated data calculated for each day were used to obtain an estimated harvest for each day, by multiplying the estimated number of smelters by the estimated pounds of smelt per car and dividing by the average smelters per car calculated separately for each area.
- (d) 15 day period: Since the smelt-run period varied, the Point Pelee data were compared with various periods. The April 13-27th Point Pelee data were compared with the same period in areas #1, 3, 4, and 5. They were compared with the period of April 20th to May 4th in areas 6, 7, 8, 9, 10, 11 and 12. They were used similarly for the period April 27th to May 11th in areas 13, 14, 15 and for the period May 11th to 25th in areas 16, 17, 18, 19 and 20.



This system was not considered entirely satisfactory but since it was the best available it was employed throughout.

The estimates were entirely worked out in order to provide each Officer with an assessment of his own area and direction for the survey in future years.

Summary

The table in Appendix IV summarizes the results including the estimates, which are not much different from the calculated figures based on the days actually surveyed.

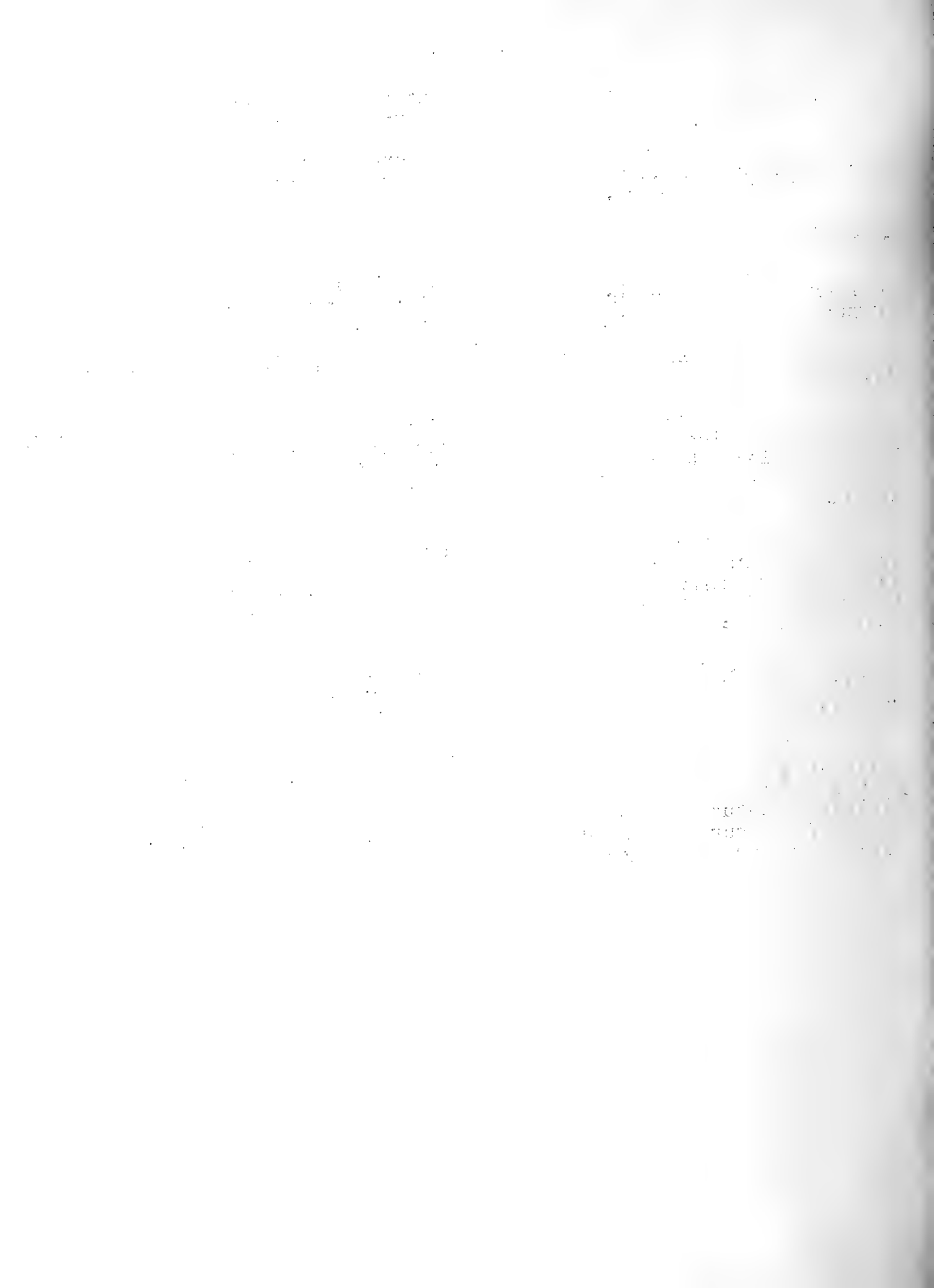
Areas 6A, 6B, 13 and 17 were not used because of lack of data to process.

In summary, this survey indicated that on the beaches, docks, and streams which were surveyed by Conservation Officers during a 15-day period extending from April 12th until May 25th, a total of 62,000 "smelters" harvested in the order of 2,995,000 pounds of smelt.

This survey was not carried out in all areas fished by sports fishermen during the smelt run. Car counts at one time each evening, obviously could not account for smelters at all times of the night. The figures therefore, represent a "measured minimum" smelting activity and harvest.

Even with the disinterest shown the run this spring by the public, according to all reports by the Officers, the sports' harvest conceivably equals the commercial harvest in Lake Erie.

The effort put forth by each Conservation Officer in collecting the information in the field under extreme conditions, and by the District office staff in their tabulations and typing of the miriads of datum was the basis for preparation of this report. The scope of the survey and data indicate the excellent co-operation given by a large number of contributors.



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APPENDIX II - Department of Lands and Forests
Smelt Harvest Survey Summary

Area _____ Officer _____

1	2	3	4	5	6	7	8	9
Date	Total Cars	Parties Checked			# Men Per Car	# Pds. Per Car	No. Smelters	No. Pds Smelt
		# Cars	# Men	# Pds				
					4/3	5/3	2 x 6	2 x 7

Remarks _____

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APPENDIX III - Smelt Harvest Survey Summary, Lake Erie

Area	1 Days Surveyed	2 Total Cars	3 Parties Checked		6 # Men Per Car	7 # Pds. Per Car	8 No. Smelter	9 No. Pds. Smelt
			# Cars	# Men				
1	2	31	31	118	3.8	434	118	13475
2	15	10730	750	2700	3.6	239	38628	2569106
3	1	8	8	32	4.0	169	32	1355
4	12	74	68	230	3.4	169	256	12838
5	11	501	94	296	3.2	129	1550	65177
6a	11	421	-	-	-	-	-	-
6b	6	115	-	-	-	-	-	-
6c	7	26	24	88	3.7	4	94	1220
7	5	19	19	70	3.7	1.5	70	30
8	1	6	3	10	3.3	1.0	20	6
9	14	2198	496	2072	4.2	66	9281	146848
10	5	185	42	159	3.8	38	689	12965
11	8	75	68	199	2.9	58	251	4377
12	11	229	45	146	3.2	7.2	689	840
13	1	1	1	3	3.0	0	3	0
14	4	24	24	71	3.0	14	71	337
15	4	17	17	40	2.4	5.5	40	221
16	2	12	12	38	3.2	11	38	132
17	1	1	1	2	2.0	0	2	0
18	1	4	4	9	2.2	10.8	9	43
19	1	3	3	6	2.0	9	6	27
20	8	104	104	213	2.0	83	213	8337
TOTAL	131	14784	1814	6502	3.6	147	52060	2837334

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APPENDIX IV - Lake Erie Smelt Sport Fishery - 1959

<u>Area</u>	<u>Number of Smelters</u>	<u>Pounds of Smelt Harvested</u>
1	517	62,272
2	38,628	2,569,106
3	156	8,201
4	362	19,336
5	2,021	92,915
6c	247	413
7	282	176
8	357	72
9	10,575	167,643
10	1,909	33,459
11	679	9,289
12	1,888	2,762
13	-	- *
14	408	1,113
15	287	970
16	745	3,408
17	-	- *
18	1,500	7,378
19	1,000	4,573
20	452	12,001
<u>TOTAL</u>	<u>62,013</u>	<u>2,995,000</u>

* Insufficient data

NAME	AGE	RELATIONSHIP	SERIAL
			1
			2
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TOTAL		TOTAL	

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